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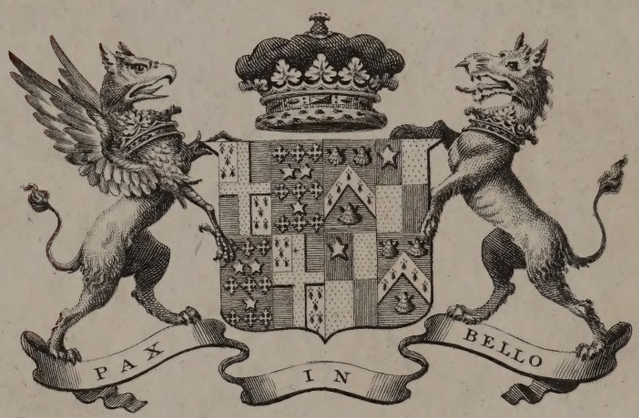

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MATHE.S HALE Miles Capitalis
Justic. de Banco Regis Ano 1677

For W. Shrowsbery at The Sign of The Bible In Duck Lane, F. H. van. Houe: sculp:

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THE Primitive Origination OF MANKIND, CONSIDERED AND EXAMINED According to The Light of Nature.

WRITTEN
By the Honourable Sir *MATTHEW HALE*
KNIGHT:
Late CHIEF JUSTICE of His MAJESTIES
Court of *KING'S BENCH.*

LONDON,
Printed by WILLIAM GODBID, for WILLIAM SHROWSBERY
at the Sign of the Bible in *Duke-Lane.* cIↃ IↃC LXXVII.

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TO THE READER.

THE ſubject Matter of this Book is a free Diſquiſition, according to the Light of Nature and Natural Reaſon, touching the Primitive Origination of Mankind, conſiſting principally of theſe Parts and Aſſertions.

I. That according to the Light of Nature and Natural Reaſon, the *Mundus aſpectabilis* was not Eternal, but had a Beginning.

II. That if there could be any imaginable doubt thereof, yet by the neceſſary Evidence of Natural Light it doth appear that Mankind had a beginning, and that the ſucceſſive Generations of Men were in their Original *Ex non genitis*.

III. That this Truth is evident by Reaſon and Arguments demonſtrative, or at leaſt little leſs than apodeictical.

IV. That there are Moral Evidences of the truth of this Aſſertion, which are herein particularly expended and examined; and how far forth they are concludent, and how far not: which I have impartially delivered.

V. That thoſe great Philoſophers that aſſerted this Origination of Mankind *Ex non genitis*, both ancient and modern, that rendred it by *Hypotheſes* different from that of *Moſes*, were miſtaken: Wherein the ſeveral *Hypotheſes* of *Ariſtotle*, *Plato*, *Empedocles*, *Epicurus*, *Avicen*, *Cardanus*, *Ciſalpinus*, *Beregardus* and others are examined, and the abſurdity and impoſſibility thereof detected.

VI. That the *Moſaical* Syſtem, as well of the Creation of Man as of the World in general, abſtractively conſidered without relation to the Divine Inſpiration of the Writer, is highly conſonant to Reaſon, and upon a bare rational account highly preferrible before the Sentiments of thoſe Philoſphers that either thought Mankind Eternal, or ſubſtituted *Hypotheſes* of his firſt Production different from the *Moſaical*.

VII. I have

VII. I have concluded the whole with certain Corollaries and Deductions, neceſſarily flowing from the things thus aſſerted, as well touching the Exiſtence, the Wiſdom, Power, Providence of Almighty God, as touching both the Duty and Happineſs of Mankind.

Though this may ſeem a laborious Work to little purpoſe, ſince the generality of Chriſtians, among whom I write, do generally believe this Truth of the Origination of the World and Mankind, as it is delivered in the Holy Scriptures; and thus to write in proof of a Truth generally received, doth rather create Doubts in Mens Minds of what they already believe, than any way advantage or confirm their belief.

I Anſwer, 1. That for my part I think Atheiſm ſo unreaſonable a thing, ſo abhorrent to the Light of Nature and Sentiments of Conſcience, that I cannot think there is ſo much ſpeculative Atheiſm abroad in the World as many good Men fear and ſuſpect: But if there be but one quarter of that Atheiſm in the World, I do not know any better Cure of it, or Preſervative againſt it, next to the Grace of God, than the due Conſideration of the Origination of Mankind. 2. Again, though the Creation of Man be generally acknowledged by *Jews* and *Chriſtians*, yet we muſt likewiſe conſider that many take it up only as a part of their Education, and not upon any ſerious, deep Conviction of the truth of it: and had ſuch Men but an Education in ſuch a Place or Country where it is not believed, or where it is doubted, they would be at leaſt ſceptical and doubtful in the belief of it. 3. The beſt of Men, and ſoundeſt believers of Divine Revelations, may be better confirmed by the acceſſion and ſuffrage even of Natural Evidences of the Verities they already believe; but howſoever, it better enables them to convince ſuch Gainſayers as will be governed in their Judgments by no other Light than the Light of Nature and Reaſon, and many ſuch there may be met withal in the World.

And upon that account, my whole Diſcourſe is bottomed upon Natural and Moral Evidences ſuited to theſe Mens Principles or Motives, by which they are guided and governed; yea when I make uſe of the Sacred and Infallible Scriptures, I do uſe them abſtractively from their Divine and Infallible Authority, and only as Moral Evidences of the Truth I aſſert:

for

for any Man may easily foresee, that an Atheistical Spirit that denies or questions the truth of the Fact therein delivered, will not be convinced by the Infallibility of that Scripture which delivers that for a Truth, which he denies or questions.

This whole Book as thou now seest it, was written by me some Years since, and hath lain ever since in my Chest, and surely therein should have lain still, but only for Three Reasons: 1. Because that some Writings of mine have without my privity come abroad in Print, which I never intended; and this might have had the same fate, if not in my Life time, yet after my Death. 2. Because possibly there hath some more care been used by me in the Digesting and Writing hereof, than of some others that have gone abroad in publick. 3. That although I could never be brought to value the Writings of mine that are published, as worthy of the publick view, yet I find them well accepted by many, which encouraged me to let this Book come abroad under my own Name; wherein I used more care than in those lesser Tractates, although I have not yet confidence enough to say that this may deserve any great acceptation: though there be many things in it which may not please, yet I do think there be many things useful, and such as will not displease Judicious Readers.

If there be any Faults or Mistakes in Quotations, in Syntax, in Translations, in Transcriptions, or if there by any Errours (as possibly there may be) in my Deductives, Inferences, or Applications; or if the Language be in some places either improper or obscure, or if the Expressions or Words which we sometimes use be not so full, so significant, or proper, or delivered from Amphibologies, yet I must desire the Reader to take this Apology for it.

1. It was written at leisure and broken times, and with great intervals, and many times hastily, as my busie and important Employment of another nature (known to the World) would give me leave; which must needs make such Breaks, and Chasms, and Incoherences, that possibly a continued, uninterrupted *series* of writing would have prevented, and carried on the Discourse with a more equal Thred.

2. A long indisposition of Health hath much hindred and interrupted me in a strict revising and amending of what possibly might have been requisite to be done.

3. A Man whoſe ſcope, and intent, and drift is at ſome one thing, and hath his Eye and Deſign fixed upon it, many times is not ſo ſolicitous nor ſo curious, nor ſo exact in the choice of his Words, eſpecially in Expreſſions of collateral things, not being the principal Subject of the Diſcourſe, which though they may lye in his way, yet are not much under his ſtrict advertence; but he thinks it is enough if he dreſſeth his Diſcourſe ſo that it tend to what it principally aims and drives at. And hence it is, that in Chronological Computations, which I ſometimes make uſe of, I content my ſelf with a more lax and common Computation, without any great curioſity or exactneſs, becauſe it equally ſerves my purpoſe as if my Computations were more critical and exact, even *uſque ad minutias Chronologicas*; and ſo in ſome other mentions of Names and Times of Authors, and the like: and likewiſe in the choice of Words or Expreſſions, wherein poſſibly I may ſometimes be too lax and free, uſing ſuch as come next into my Mind, without a curious or critical choice; which is more excuſable in a Diſcourſe of this nature, than in ſome Polemical and Controverſial Diſcourſes of other natures, where Men uſually catch at Words and Expreſſions, and it is the greateſt part of their Buſineſs.

4. I muſt alſo deſire my Readers pardon, in that in my Tranſcripts of ſome entire Texts out of *Ariſtotle*, *Plato*, *Plutarch* and others, I uſe the *Latin* Tranſlation, and not the Original *Greek*, wherein the Authors wrote: I was a better *Grecian* in the 16th, than in the 66th Year of my Life; and my application to another Study and Profeſſion, rendred my skill in that Language of little uſe to me, and ſo I wore it out by degrees.

And thus thou haſt this Book preſented to thy view, I wiſh thee as much Contentment in Reading as I had in Writing it: If there be any thing therein that may be uſeful to thee (as I ſuppoſe there may be) there is matter for my Contentment and thy Benefit; if all be not anſwerable thereunto, and to thy expectation, the former Conſiderations give thee reaſonable Motives of Charity, to excuſe it.

The Contents.

SECT. I.

CAP. I.

THE Introduction, declaring the Reason of the Choice of this Subject, and the Method of the intended Discourse.

CAP. II.

Touching the Excellency of the Humane Nature in General.

CAP. III.

A brief Consideration of the Hypotheses *that concern the Eternity of the World.*

CAP. IV.

Concerning the Origination of Mankind; and whether the same were Eternal, or had a Beginning.

CAP. V.

Concerning the Supposition of the first Eternal Existence of the common Parents of Mankind, and the production of the succeeding Individuals from them.

CAP. VI.

Certain Objections against the Truths formerly delivered, and against the Reasons given in proof thereof, with their Solutions.

SECT. II.

CAP. I.

The Proofs of Fact that seem with the greatest Moral Evidence to evince the Inception of Mankind; and first, touching the Antiquity or Novity of History.

CAP. II.

Concerning the first Evidence, the Antiquity of History and the Chronological Account of Times.

The CONTENTS.

CAP. III.

The Second Evidence of Fact, namely, the apparent Evidences of the first Foundation of the Greatest and Ancient Kingdoms and Empires.

CAP. IV.

The Third Instance of Fact, proving the Origination of Mankind, namely, the Invention of Arts.

CAP. V.

The Fourth Instance of Fact, seeming to evince the Novity of Mankind, namely, the Inceptions of the Religions and Deities of the Heathens; and the deficiency of this Instance.

CAP. VI.

A Fifth Consideration concerning the Decays, especially of the Humane Nature; and whether there be any such Decays, and what may be collected concerning the Origination of Man upon that Supposition.

CAP. VII.

The Sixth Evidence of Fact, proving Novitatem generis humani, *namely, the History of the* Patres familiarum, *and the original Plantation of the Continents and Islands of the World.*

CAP. VIII.

The Seventh Evidence of Fact proving the Origination of Man, namely, the Gradual Increase of Mankind.

CAP. IX.

Concerning those Correctives of the Evils of Mankind, which may be thought to be sufficient to reduce it to a greater Equability.

CAP. X.

The farther Examination of the precedent Objection.

CAP. XI.

The Consequence and Illation upon the premisses against the Eternity of Mankind.

CAP. XII.

The Eighth Evidence of Fact proving the Origination of Mankind, namely, the Consent of Mankind.

SECT.

The CONTENTS.

SECT. III.

CAP. I.

The Opinions of the more Learned part of Mankind, Philoſphers and other Writers, touching Man's Origination.

CAP. II.

Touching the various Methods of the Origination of Mankind.

CAP. III.

Touching the Second Opinion of thoſe that aſſert the Natural Production of Mankind ex non genitis, *or the poſsibility thereof.*

CAP. IV.

Concerning Vegetables, and eſpecially Inſecta Animalia; *whether any of them are* ſponte orta, *or ariſe not rather* ex præexiſtente ſemine.

CAP. V.

If it be ſuppoſed that any of thoſe Inſects at this day have their Original ex non genitis, *or* ſpontaneè; *whether yet the ſame may be ſaid a Natural or Fortuitous Production.*

CAP. VI.

Suppoſing the Production of Inſects were totally ſpontaneous, equivocal, and ex putrido; *whether any Conſequence be thence deducible for the like Production of Perfect Animals, but eſpecially of Men.*

CAP. VII.

Touching the Matter of Fact it ſelf, whether de facto *there hath been any ſuch Origination of Mankind, or of any Perfect Animal, either Natural or Caſual.*

SECT. IV.

CAP. I.

Concerning the laſt Opinion, attributing the Origination of Mankind to the immediate Power and Will of Almighty God.

CAP. II.

The Moſaical *Hiſtory touching the Production of the World and of Mankind, and the Congruity and Reaſonableneſs of the* Moſaical Hypotheſis.

The CONTENTS.

CAP. III.

Concerning the Production and Formation of Man.

CAP. IV.

The Reasonableness of this Hypothesis *of the Origination of the World, and particularly of the Humane Nature, and the great Advantages it hath above all other* Hypotheses *touching the same.*

CAP. V.

Concerning the Nature of that Intelligent Agent that first formed the Humane Nature, and some Objections against the Inferences above made, and their Answer.

CAP. VI.

The Reasonableness of the Divine Hypothesis *touching the Origination of the World, and particularly of Man, and the preference thereof before all the other precedent Suppositions.*

CAP. VII.

A Collection of certain evident and profitable Consequences from this Consideration, that the first Individuals of Humane Nature, had their Original from a Great, Powerful, Wise, Intelligent Being.

CAP. VIII.

A farther Enquiry touching the End of the Formation of Man, so far as the same may be collected by Natural Light and Ratiocination.

De

DE HOMINE.

CAP. I.

The Introduction, declaring the reaſon of the choice of this Subject, and the Method of the intended Diſcourſe.

IT is an admirable evidence of the Divine Wiſdom and Providence, that there is that ſutable accommodation and adaptation of all things in Nature, both to their own convenience and exigence, and to the convenience, uſe, and exigence of one another; which evidenceth, 1. That all things are made, governed, and diſpoſed by a moſt intelligent, and wiſe, and powerful Being. 2. That that governing Being is but one, and that all this accommodation, and adaptation, and mutual ſubſervience of the things in Nature are the product of one moſt wiſe decree, counſel, and purpoſe of that one moſt wiſe, intelligent, and ſoveragin Being.

It is not here ſeaſonable to make a large proſecution of the particular inſtances of that accommodation of things in Nature, nor of the neceſſity of the former conſequences ariſing from it. The inſtances thereof, that are ſutable to the Deſign meant in this Diſcourſe, ſhall be only theſe two, which I ſhall but ſhortly touch: 1. The admirable accommodation of Senſible Faculty to the Objects of Senſe, and of thoſe Objects to it, and of both to the well-being of the Senſible Nature: 2. The admirable accommodation of the Intellectual Faculty in Man to Intellectual Objects, and of thoſe Objects to it, and of both to the well-being of the Humane or Rational Nature.

Touching the former, the Senſible Nature in its complement and integrity hath five exterior powers or faculties, that are accommodated to all thoſe motions or impreſſions of natural bodies, and their accidents which are uſeful to it; and by theſe five ports or gates all thoſe impreſſions which are uſeful for the perception of the Senſible Nature are communicated to it, namely, the five exterior Senſes. It is not only poſſible, but very likely, that there may be ſuch motions or qualities of Bodies, that make not any impreſſion upon any of thoſe Senſes; but if there be ſuch, they are ſuch as are not of uſe for the perception or convenience of the Senſible Nature. But for ſuch as are neceſſary for ſuch perception of the Senſible Nature, there is no motion, quality, or operation of external Bodies, but what hath accommodated to it a Faculty in Senſe receptive of it: Is there ſuch a motion or objectiveneſs of external Bodies which produceth light or colour, figure, vicinity, or diſtance? the Faculty of Sight is fitted to receive that impreſſion or objectiveneſs, and

that objectiveneſs fitted and accommodate to that Faculty. Is there that motion or objectiveneſs that cauſeth ſounds? the Faculty of Hearing is fitted to be receptive of it, and that objectiveneſs or motion (or what ever it is) fitted to make an impreſſion upon that Faculty. And ſo for the other Senſes. And by this adaptation and congruity of theſe Faculties to their ſeveral proper Objects, and by the fitneſs and proportionateneſs of theſe objective Impreſſions, Qualities, or Motions, upon their reſpective Faculties, accommodated to their reception, the Senſible Nature hath ſo much of perception and reception of things as is neceſſary for its ſenſible Being. I ſpeak not here of thoſe other interior Senſes of Diſcrimination of the Objects of Senſe, Phantaſie, Memory, Appetite, and the reſt, for they are not at preſent to my purpoſe.

II. And what is thus excellent and admirable in the accommodation between the ſenſitive Faculties and their Objects, is to be obſerved in the intellectual Faculty, though the Faculty and Object are far more noble and excellent than that of Senſe. As there is an accommodation between the viſive Faculty and its Object, and as there is an accommodation between the Faculty of the Taſte and the Object, the Object fitted to make an impreſſion upon the Faculty, and Faculty fitted to take the impreſſion from the Object; ſo there is an accommodation, and ſutable adaptation, between the intellective Faculty and the intelligible Object, the Object as it were thruſting it ſelf into the Faculty, and the Faculty receiving and perceiving the Object.

The means of derivation, and immediate union of theſe intelligible Objects to the Underſtanding, are various: Sometimes divine and ſupernatural, as by immediate irradiation or revelation; ſometimes artificial and inſtituted, as by diſcourſe and inſtituted ſigns, and thus Intelligibles are conveyed from one man to another by words or writing; ſometimes natural, and that ſeems to be by three kinds of means, 1. by the mediation of Senſe, which is ordinarily the firſt baſis of all humane intellectual knowledge; 2. by ratiocination or diſcourſe of the Mind, whereby even from ſenſible Objects the Intellect receives a farther proſpect of other Intelligibles, not immediately preſented by or to the Senſe, but by conſequences, deductions, and concluſions deduced from things more obvious to Senſe, and perchance at firſt repreſented by it; 3. there ſeems to be a third means, which is a kind of intuition; there are ſome truths ſo plain and evident, and open, that need not any proceſs of ratiocination to evidence or evince them; they ſeem to be objected to the Intellective Nature when it is grown perfect and fit for intellectual operation, as the Objects of Light or Colour are objected to the Eye when it is open, they are underſtood and aſſented unto *quaſi per ſaltum & intuitum*; and though theſe truths are ſuch as are alſo deducible by ratiocination and rational proceſs, yet the connexion between the premiſſes, and the concluſion in them, are ſo clear, and the tranſition from the premiſſes to the concluſion is ſo ſwift, ſhort, and clear, that it ſeems to be in a moment, and the aſſent to them and evidence of them is inſtantaneous; ſuch are many concluſions of moral and intellectual truths, which ſeem upon this accompt to be congenite with us, connatural to us, and engraven in the very frame and compages of the Soul, becauſe they are Intelligibles of that nature that preſent themſelves, and thruſt themſelves into the Underſtanding imme-

immediately, and many times without the mediation of Senſe or Ratiocination. There is that primitive congruity between theſe Intelligibles and the Intellectual Faculty, that they are immediately united as I ſaid by a kind of intuition, and though they are deducible by ratiocination, as concluſions from premiſſes, yet in reſpect of their ſwift *tranſitus* in the Underſtanding they ſeem to be principles.

Now this excellent Faculty of the Underſtanding, though it ſeems to be paſſive in relation to its reception of its Object, yet it is not barely a paſſive Faculty, it hath an activity about that Object that it receives, and it actively trades upon it to its farther improvement.

And therefore according to the nature of this excellent Faculty the Underſtanding (which as it hath been ſaid is partly active and partly paſſive) there are two things that do much improve and enrich this Faculty.

Firſt, It is improved by its Exerciſe and Employment, the very Faculty it ſelf will degenerate, and grow ſluggiſh, dull, and ruſty by idleneſs: The exerciſe of the Intellective Faculty makes it agil, quick, and lively, yea though the object about which it is exerciſed be poor, little, and low, yet a Man hath this advantage by the exerciſe of this Faculty about it, that it keeps it from ruſt and torpidneſs, it enlargeth and habituates it for a due improvement even about nobler Objects.

Secondly, It is enriched by the nobleneſs and worth of the Object about which it is exerciſed, when the Object is noble, generous, uſeful, and ſutable, at leaſt in a convenient degree to the worth of the Faculty: Diligence and Induſtry, and exerciſe of the Intellective Faculty therein, doth not only exerciſe, imploy, habituate, and enlarge the Faculty, but enrich and enable it by the worth of the Object wherewith it is furniſhed.

There is ſo great variety of Intelligibles in the World, ſo much objected to our Senſes, ſo much deducible from them by Ratiocination and Diſcourſe, and every ſeveral Object ſo full of ſubdivided multiplicity and complicateneſs: And on the other ſide, the life of Man ſo ſhort, and the approaches of the Underſtanding to the knowledge of things, is for the moſt part ſo ſlow, and gradual, and difficult, that it is not to be hoped that a Man ſhould ever attain the full comprehenſion even of any ſmall inconſiderable Inſect, with all its connexions, dependences, relations, deductions, and conſequents; much leſs can it be expected, that any Man ſhould ever attain the full knowledge of that ſtupendious multiplicity and variety, that appears in all or any conſiderable part of thoſe Objects of our Senſes that occur in that *mundus aſpectabilis* which every day we behold: And yet even the World we ſee is the ſmalleſt part of that which we neither do nor can ſee.

Therefore it ſeems to be worth the care of a Man, that hath a deſire to improve thoſe two great Talents that God hath lent us, namely, his Time and his Faculties; that he not only exerciſe his Faculty to keep him from ſloth and idleneſs, but out of this great multiplicity of Objects to chuſe ſome ſuch for the exerciſe of his Faculties, that by their worth and value may improve and advance them; and ſuch as may be profitable for this uſe and exerciſe, and in ſome meaſure attainable with competent certainty and ſatisfaction.

There be certain qualifications that do much commend an Object to a Man's Enquiry, which are principally theſe:

First, the nobleneſs and worth of an Object: Secondly, the uſefulneſs of this Object being known, or of the knowledge of it: Thirdly, ſufficient certainty touching the Object, or of the knowledge of it: Fourthly, that the Object be ſuch as may be large enough to ſatisfie the Intellective Faculty, and yet not diſtract it through its multiplicity, vaſtneſs, or extent. Something I ſhall ſay of each of theſe.

I. The firſt qualification in the choice of an Object is, that it be noble and worthy of the Faculty that is employed about it. There is not only a congruity herein between the nobleneſs of the Faculty and the Object, but alſo the Faculty is enriched and advanced by the worth of the Object. It was the reproach of *Domitian* a great Emperour, that he buſied himſelf in hunting of Flies: Yet I do not blame the purſuit of the Works of Nature, even in the Contemplation of the ſmalleſt Works thereof; for though the things themſelves are comparatively low, and inconſiderable, yet even in the ſmalleſt Vegetable or Animal, even in the very little Inſects, there appears the excellent Work of the Divine Wiſdom, and therefore there is a worth and excellency in the Contemplation of them, eſpecially when that Contemplation is directed to the ſearch and admiration of the great Wiſdom and Skill of the great Creator, who in many ſmall Inſects, that in reſpect of their minuteneſs almoſt eſcape the Sight, hath placed and digeſted as great a variety and excellency of Organs, Faculties, and Inſtincts, as in the Whale or Elephant: And therefore the Labours herein of *Ariſtotle*, *Fortunius Licetus*, *Muffetus*, *Aldrovandus*, *Goddart*, and others, that have written whole Volumes concerning the generation, production, alteration, and variety, even of ſmall Inſects: Flies and Worms are not without their worth and uſe, ſeeing in the leaſt of theſe the curious Wiſdom, Skill, and Power of the great Maker of all things is conſpicuous; and though they are but little Rills, yet if they be cloſely followed, they are and may be Manuductions to lead us to that Ocean of Wiſdom, Power, and Goodneſs of the God of Nature, from which they had their original.

II. The ſecond qualification that commends an Object, or Subject of Enquiry, is the uſefulneſs of its knowledge. It is true, that there is ſcarce any kind of knowledge of any Object but is grateful and uſeful in ſome meaſure to the Underſtanding: But among the *Scibilia* or *Intelligibilia* in the World, there are ſeveral degrees, ſome are not only uſeleſs to be known, but ſeem to be meer impertinencies; as for inſtance, many Grammatical Criticiſms, and how this Word was written by one Author, how by another, what faſhion Cloaths the *Roman* Officers, Military, Civil or Sacred uſed, and very many Curioſities relating to Languages: It is true, ſo far forth as Words and Languages are means to derive unto us the memory, relation, or underſtanding of the things contained under them, ſo far the knowledge of them is uſeful in order to that end, but Languages ſimply in relation to themſelves are but a narrow piece of ſpeculation, and conſequently thoſe great expences of time and ſtudy that ſome have taken about little uſeleſs Criticiſms, and trifles of that nature, hath been an improvident expence, and miſemployment of their time and faculties. Again, ſome things there are which are yet of more value, but yet but of little uſe, they are known only that they may be known, or inquired into only for the exerciſe of Wit, Invention and Subtilty:

Subtilty: What great pains hath been taken concerning the Quadrature of a Circle, and the Duplication of a Cube, and ſome other Mathematical Problems? And many Men have ſpent much time, and written great Volumes touching thoſe matters, which yet were they attained, the knowledge reſts in it ſelf, and is never applicable to any uſe anſwerable to the pains of their acqueſt. Again, there be many things touching Matters Phyſical, which though they are full of contentation to be known, and have their uſe thus far, that they are an inquiry and diſcovery of things that are the Works of God, and of his Wiſdom, and ſerve to explain many *Phænomena* in Nature, yet they are otherwiſe of little uſe to Mankind; as concerning the degrees of acceleration of Motion, the gravitation of the Air, the exiſtence or non-exiſtence of empty ſpaces, either coacervate or interſperſed, and many the like, which have taken up the thoughts and times, and exerciſed the Wits, and even the Paſſions of Men in Diſputes concerning them; and yet though the knowledge of them is curious, and contenting in it ſelf, yet it is not much ordinable or applicable to the uſe and benefit of the Man that knows them, or of others: And therefore though the knowledge of theſe Objects be commendable unto us upon an account of their contentation and curioſity, yet they do not commend their knowledge to us upon the account of their uſefulneſs and beneficialneſs.

Again, ſome Objects there are that are not only noble in themſelves, but they have alſo at leaſt a mediate and preparatory uſefulneſs to Mankind, though perchance in themſelves and immediately they have not that commodation. Thus the knowledge of divers parts in Natural Philoſophy, and the rules, motions, and variety of Qualities and Operations of divers Natural Objects, the connexion of Cauſes and Effects, the obſervation of the Order of things in Nature, are of ſingular uſe to carry the Mind up to the acknowledging and admiration of the Great Efficient and Governour of the World, of His Wiſdom, Power, Goodneſs, Bounty, and conſequently to raiſe up the Heart to veneration of Him, dutifulneſs and gratitude unto Him, dependance upon Him, and a deep impreſſion of Natural Religion towards Him, and of all thoſe conſequents that ariſe in the Mind and Life from this habit of Religion: So true is the Saying of an excellent Naturaliſt of our own, *A little knowledge in Philoſophy may perchance make a proud empty Man an Atheiſt, but it is impoſſible that Atheiſm can lodge in a Mind well ſtudied and acquainted with Natural Philoſophy.*

And as thus the knowledge of Nature is uſeful to Mankind, to bring him to and confirm him in the knowledge of the Glorious God, ſo it is preparatively uſeful, and indeed neceſſary to many uſeful things in this Life, as to make a Man a good Phyſician, *ubi deſinit Philoſophus ibi incipit Medicus*, where the Philoſopher ends the Phyſician begins; which next to the knowledge of Almighty God is of great neceſſity and uſe to Mankind.

And touching Geometry, Aſtronomy, and Arithmetick, though in the knowledge of them there be many things that are nice and curious, and not ſo much in order to uſe as to ſpeculation and exerciſe of Wit, yet they are ſuch Objects, the knowledge whereof is in many things very beneficent to Mankind, as we ſee in the conſtruction of all Mechanical Engins

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in the measuring of Bodies, Superficies, and Distances, in the Rules and Exercise of Architecture, Fortifications, and ordering of Battalia's, Computations and Reckonings in Contracts and Merchants Affairs, in Navigation, in the Measure and Computation of Time, and the right knowledge of several Seasons, these Mathematical Subjects and Sciences have great use in relation to humane affairs and concerns.

And as thus those more curious Sciences have their use in the Affairs of Mankind, and are commended unto us, not only upon the account of the nobleness, but also of the usefulness thereof; so the knowledge of History, of Humane Laws, of Moral Philosophy, and of Political and Oeconomical regiments of the various Modes, Temperaments, and Qualifications of Governments, with their Appendages, are upon the account of their usefulness to Humane Society, and the Peace, Tranquillity, and Order of the World, and of the particular Societies, Relations, and Persons therein commended to our knowledge and contemplation, as things without which the World of Mankind would soon be in disorder and confusion. And although these Studies are not so pleasing and grateful to the Understanding, as those other more curious Contemplations either Physical or Mathematical, yet they recompence it with the excellency and necessity of their use, in relation to the noblest visible Creature, Man, and in relation to his noblest and most useful posture and station in this World, namely, a state of regulated Society and Government.

Now according to the kind or degree of the usefulness of the Objects to be known, so the knowledge thereof is more or less commended unto us, upon the account of the various degrees of usefulness: Some Objects and their knowledge are of greatest value, because their use is of more universal concern and important necessity, and such is the true knowledge of Almighty God, His Greatness, Power, Wisdom, Goodness, and Will, especially as He hath revealed Himself in His Word, and those noble habits that upon that account are ingenerated in the Soul, as Religion, Gratitude, Obedience, and Tranquillity of Mind, Regularity of the Soul and Life.

And upon the same account there is a great value in knowledge of Morals, and of those Duties that we owe to our selves and others, and a conformity of Minds and Lives to the Dictates of Religion and Morality. And the excellence of their use, and consequently the commendation of that knowledge upon that account is evident in these particulars: 1. The right and true knowledge of those things do not only perfect our Souls and Natures by the excellency of the knowledge it self, but they perfect our Souls and Natures with Goodness: They do not only perfect the Intellectual Faculty, but they also perfect the Volitive Faculty; they make the Man not only more knowing, but more wise, and they also make him the better, more just, sober, temperate, religious: A Man may know very much in Mathematicks and Natural Philosophy, and yet be a bad Man; but a Man truly acquainted with the knowledge of God, and with the due sense of his Duty to Him in matter of Religion, and his Duty to others in points of Morality, which is a part also of the Divine Will, is not only a knowing Man, but becomes also a good Man (if indeed his knowledge be sound and true).

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Again, 2. All other knowledge meerly or principally ſerves the concerns of this Life, and is fitted to the meridian thereof: They are ſuch as for ought we know will be of little uſe to a ſeparate Soul, at leaſt we do not know whether the Soul in its ſtate of ſeparation will be much concerned in the knowledge of Phyſical or Mathematical Learning, or the Rules or Methods of Political Regiment: But this we are or may be ſure, that the Soul will carry with it into the other World that knowledge of God which it acquires here, and receive an unſpeakable improvement thereof by a nearer union to Him; and it will carry with it thoſe improvements and advances of Piety, Goodneſs, Righteouſneſs, Holineſs, thoſe Habits and Graces that it began here; and as the Soul is improved and made the better in this Life by this knowledge, and thoſe effects and meliorations that it here acquired by them, ſo it will carry along with it thoſe advantages to the next World; for there is a connaturality and congruity between that knowledge and thoſe habits, and that future eſtate of the Soul. So that this kind of knowledge is not only ſerviceable and uſeful for the preſent Life *in via*, but is proportioned to that ſtate that is *in patria*.

And as touching the knowledge of things that are meerly accommodate to the preſent Life, they receive their diſparity of value in this reſpect, according to the diſparity or different degrees of uſefulneſs. Some are uſeful for nobler ends, ſome for lower and more inferior ends; ſome are in a greater degree uſeful for the ſame ends than others; and according to the varieties of ends, uſes, and their degrees, the knowledge of them (as in reference to this part of the commendation of an Object, namely, uſefulneſs) is more or leſs eligible. But this is too large a Subject particularly to proſecute in this place.

III. The third commendation of a Subject of Contemplation, and that renders it eligible, is Certainty. Where the Subject is uncertain, and the evidences touching it doubtful, although perchance the ſpeculation that it affords be very high and ſublime, yet ſuch a Subject is not in this reſpect ſo eligible as what is more certain, for it leaves an impartial and ſerious Mind full of doubt and diſſatisfaction; and where it meets with a Man of a buſie phantaſie, ſelf-conceited, and partial to himſelf and his own thoughts, and that would be thought to know beyond the common ſtandard of other Mens Reaſon, it puts him upon the confident framing of Hypotheſes built meerly upon Imagination, and from theſe weak foundations he deduceth Syſtems of Conſequences and Concluſions, which being built upon meer fanciful and inevident Suppoſitions, fall to nothing but duſt and ſmoke as ſoon as their evidence is impartially examined. Some Subjects are ſo remote from us that we are ſtrangers to them, and our knowledge concerning them is meerly conjectural, and thoſe very conjectures for the moſt part wanting competent *media* to make them tolerably probable. Concerning the Extent of the Univerſe, the Plurality of Worlds, the State of Heavenly Bodies, whether they are inhabited, and with what kind of Inhabitants, whether they are animate Bodies, whether they are moved by Intelligences, or by their own Forms, or by the motion of the Body of the *Æther*, or thoſe imaginary *Vortices* wherein they are placed? Theſe and many ſuch Speculations touching things at this diſtance may gratifie the Imagination, but never

never ſatisfie the Mind. Again, ſome things though they are or may be near unto us, yet are of that ſubtilty that they eſcape our Senſes, and thereby we cannot make our approaches to their diſcovery. As concerning the Nature of Spirits, their *ubi*, *motus*, the manner of their Intellection and mutual communication of Notions; by what means or in what manner actual Intellection is effected in the Soul; how the Species, Order, and Circumſtances of things are preſerved in the Memorative Faculty or Organ, or where elſe? theſe and many other hidden parts of Nature, even of a far lower form, are unacceſſible to us.

The Contemplation of the Univerſe, and of the Natural Cauſes and Effects therein, is indeed an excelleut Contemplation: For, firſt, it exerciſeth the Intellectual Faculties, keeps them in motion and employment, and thereby perfecteth them. Secondly, It is full of delight and contentation to the Mind. Thirdly, Although the Underſtanding attains not a perfect diſcovery of what it ſearcheth after, yet many times undeſigned and unthought of diſcoveries of many excellent things recompenceth the loſs of the principal intention; as thoſe that have bent their endeavour to attain the Philoſophers Stone, though they never attain their end, yet in their proceſs towards it do many times light upon excellent diſcoveries which they never thought of or deſigned, which in a great meaſure recompenſeth their diſappointment in the Particular ſought after. Fourthly, It gives a great diſcovery of the admirable Wiſdom and Power of God in framing and ordering of the World, and ſo becomes a manuduction to the knowledge, acknowledgement, and adoration of Him.

But yet when we conſider how ſhort and weak our beſt diſcoveries are in the moſt acceſſible, obvious particulars, and narroweſt Integrals of the Univerſe: When we conſider how many things in Nature eſcape our Senſes, and the diſcoveries thereof; and yet how much we ſtand in need of the diſcoveries of Senſe, and ſenſible and experimental obſervation, to bottom any ſound conjecture concerning the Nature, Cauſes, and Effects of the things in Nature, and how uncertain, fanciful, and imaginary our Suppoſitions are without it, whereby it comes to paſs, that we many times frame ſuppoſitions and concluſions concerning things ſuppoſed to be in Nature, before we have any certain evidence, whether in truth the very things about which we frame our ſuppoſitions or concluſions have at all any real exiſtence; or if they have, yet for want of a clear, and ſenſible, and experimented obſervation of them, our poſitions and concluſions touching their Cauſes, Effects, Order and Methods of their procedure are but fictions and imaginations, accommodated to our Inventions rather than to the things themſelves, and ſuch as we rather project we would have them be, if we had the making of them, than what in truth they are. And laſtly, if we conſider the vaſt extent and multiplicity of the whole Compaſs of the Univerſe, and the things therein contained, the many parts thereof, that either in reſpect of their tenuity or diſtance eſcape the reach of our Senſes, the infinite complications and combinations of ſeveral concurrences, cauſes, and contributions to the conſtitution and operation of almoſt every Integral in Nature; the ſhortneſs of our Lives, and the many neceſſary diverſions that we have, and muſt neceſſarily have from thoſe Contemplations. I ſay, when we conſider

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these things, it seems a thing utterly to be despaired of to attain a full, certain, evident knowledge of the whole Universe, or of any considerable portion thereof.

And hence it is, that if we consider the various *Hypotheses* of the ancient and modern Philosophers, touching the general Systeme of the World, and those more Universal and Cardinal Solutions of the common and great Appearances in Nature, we shall find them or the greatest part of them, to be little else than excogitated and invented Models, not so much arising from the true Image of the things themselves, or resulting from the real Existence of them, as certain instituted and artificial Contrivances of mens Wits and Fancies. And these Suppositions being thus invented, they distort, stretch and reduce the Orders of things in a conformation to those pre-conceived Suppositions; and then by the Inventers of them, and those that are their followers, and would seem to be men of quicker sight than others, and not to come too short of the perceptions of their Leaders, they are in a little time magnified into the true Solutions of the *Arcana Naturæ*, and then all or most of their Argumentations, Positions, Superstructions and Conclusions, are founded upon, and conformed unto, and deduced from these excogitated *Hypotheses*, as if they were the true, and only and real frame and constitution of things, when they have as little reality, and less evidence than the imaginary solid Spheres in the Heavens, or their Musick, the Horses of the Sun, or any other Poetical Fictions.

And if at any time some one *Phænomenon* of Nature appears, that crosseth any of these Suppositions or *Hypotheses*, or suits not with them, or is not salved by them, presently great pains is taken to supply that Defect with some subsidiary Supposition, that may stop that Leak, and piece up the *Hypothesis*, which must be presently granted to be true, not because there is any evidence of it from the things themselves, but because it suits with that artificial and precarious *Hypothesis* which was before taken up and made much of.

This we may easily observe to be true, if we should examine all the various Suppositions of leading men in their several Sects.

The Chymical Philosophers make their *Tria prima*, *Salt*, *Sulphur* and *Mercury*, the great constituent Principles of all Bodies; others add two more: And their evidence that they are so, are, because they find by their solutions by Fire, some things which they call by these Names, to be that whereinto Bodies are dissolved; when, for ought can be evidently made out, many of these are not so much really in the constitution of the Bodies themselves, as the very alterations or changes of them by the force and energy of that active Element, or at least, though after their solution, they assume the shapes of *Salt*, *Sulphur* and *Mercury*, yet there are even in those Consistences very various Contextures, differing extreamly in each Body from other, though they seem to assume some analogy of shape: And possibly there may be a thousand Constituents of different Natures from any of these supposed Principles in Bodies, both before and after their solution by Fire or Heat.

The *Aristotelians* have excogitated another sort of Suppositions of Principles, *Matter*, *Form* and *Privation*. And yet it is very difficult to conceive that any such thing should be as *Matter*, undetermined by something

called *Form*; and as difficult to conceive what many ſorts of theſe Forms are (which they call ſubſtantial) whence they ariſe, what becomes of them, whether ſome of thoſe they call Subſtantial, are any other than the various Modifications of *Matter*; whether others of them are not ſome middle Nature, neither Bodies nor Accidents, but Powers of a different nature from Bodies, Accidents, or Qualities, or Subſtances, though not ſo obvious to our perception: This *Hypotheſis* therefore ſeems for the moſt part, to be a kind of artificial contrivance, not wholly taken from the natures of things, but fitted to give ſome kind of explication of them; and for the moſt part an Engine to guide our Conceptions, as the Figures in *Logick*, or the artificial Schemes for the finding out a *Medium* uſed by them; *Barbara*, *Celarent*, *Darii*, &c. *Napcas*, *Cipinis vel Nipis*.

Again, if we look upon the Suppoſition of *Epicurus*, and his Explicator, *Lucretius*, and his Advancer, *Gaſſendus*, how many things muſt be taken for granted, that are not only perfectly inevident to our ſenſe, but altogether improbable? The multitude of phyſically indiviſible Atoms, their ſtrange Figures acommodated to their Motion, Adheſion, and Coagulation, their declined Motions, and the means of their Coalition: And when all this will not ſerve to contain things within any poſſible certainty or ſpecifical determination, to patch up that defect, certain *Moleculæ Seminales* muſt be ſuppoſed to make up that Defect, and to keep the World and its Integrals from an Infinitude and Extendleſneſs of excurſions every moment into new Figures and Animals, and yet made up meerly by chance, and by the contexture of thoſe Atoms which have neither quality nor energy, nor any thing elſe beſides their ſmall and imperceptible Moles, to make them operative, and that Local Motion which they there have; but they teach us not from whence they have it.

Again, If we look upon *Des Cartes* his Suppoſition, who was not altogether content with the former, but gave it ſome Correctives, though the main *Subſtratum* be of *Epicurus*; what colour of evidence have we of the various Configurations of his Atomes, the grinding of them round by their mutual attritions, the coalition of the Globular Atomes into the Heavenly Bodies, the filling of Chinks and Interſtices by the *Ramenta* of the greater, whereby a *Materia Subtilis* is diffuſed through the Univerſe, which is inviſible, performs moſt of thoſe motions that we ſee in things, that the Animals are only Engins, and actuated by the mobility of this ſubtil matter? Theſe, and infinite more artificial Inventions of his there are, that neither Senſe nor Reaſon could ever acquaint him or us with; but they are an ingenious Creature of his own fruitful Invention, wittily framed to explicate not ſo much the Nature of things, but thoſe Conceptions he entertained thereof, and to reduce and range them into an Order contrived by him, not by Nature.

This Excurſion I have uſed to ſhew how great a difficulty there is for a man to have a ſuitable conception of the great Fabrick of the World with any tolerable certainty, whereby it hath come to paſs that the readieſt and moſt exerciſed Wits have fallen into ſo great varieties of explication thereof, and yet all of them ſo full of unevidence and incertainty, ſo full of precarious and imaginary *Poſtulata*, ſo full

full of unreasonableness, and improbability, and impossibilities in themselves, and one with another, that a man that is not imposed upon by the Veneration of the Authors, or his own Phantasie, cannot tell how to fix in any of them but must cry out upon them with the Comedian, *Probè feciſtis, incertior ſum nunc quàm dudum:* Ye have mended the matter well; I am now more in doubt than before: Neither are we ever likely to attain any certain or satisfactory knowledge in the Physical Causes, Effects and Appearances in their largest extent and latitude.

4. The fourth commendation of an Object of Knowledge is, that if it be meerly Physical or Mathematical, it bears some proportion to the Intellective power, neither too narrow, and circumscribed into a small compass, nor yet too full of multiplicity: The former satisfies not the Understanding; for it soon exhausts all that is in it, and leaves the Understanding no work to exercise it self withal. The latter surchargeth and oppresseth the Understanding with its multiplicity. And upon this latter account it is, that although the whole Universe and every part thereof are Objects full of excellency and worth, yet the multiplicity thereof is so great and various, that the Understanding falls under a kind of despondency of getting through so great a Task: and those that have undertaken the full speculation of all the parts of the visible World, have done it but superficially, lightly, and in Generals; the time of Life and the Intellective faculty, that moves but gradually and successively, have not been sufficient for an exact account of all things visible: And therefore they that have designed exactness and deep scrutiny into things, have taken some one part of Nature for that purpose; and even in those single Objects there is most commonly a connexion of such various Appendances or Incidents that they that have set themselves upon such seemingly narrow Enquiries, have found it a business enough to take up a greater portion of Time and Enquiry than our short Lives will afford us; as may easily appear by the great and large Tractates of them that have written concerning the little Organ of the Eye, or the Visive Faculty, the Magnetick Motions and Variations, or some other single Organ or Faculty of the Reasonable or Sensitive Nature.

Among the many Objects of Knowledge, there seem to be two especially, which upon the most part of the before-mentioned accounts, most commend themselves to our contemplation and enquiry; namely, the knowledge of the ever-glorious God, and the knowledge of our selves and the Humane Nature. Almighty God is the highest and most excellent and soveraign Object of the Intellectual Faculty: It is true, he falls not under the last qualification. Though he is but one, and one most simple uncompounded Being, yet his Nature and Perfections, his Power, Wisdom, Goodness, and all other Excellencies are infinite and incomprehensible by any intellectual Nature but himself; and therefore he is an Object infinitely too large for the comprehension of any created Understanding: He is a Light too bright for our Intellective eye to see, but by reflexion, or through the Vail of his Word or Works. The more we know of him, and the more we draw near unto him by serious and humble contemplation, the more we discover an endless and unsearchable Ocean and Perfection in him, so that we must not, cannot expect to find out the Almighty to perfection; his ways are unsearchable and past

finding out, and much more his Eſſence and Perfections; ſo that though he be the moſt natural, and the moſt deſirable Object of created Underſtandings, he is an Object infinitely too large for it.

But although in reſpect of the meaſure of his Perfection, he be an Object unproportionate to a created Underſtanding, a Light too bright, and an Ocean too large and too deep for it, yet there is ſo much of his knowledge attainable by us, as is ſufficient for uſe, nature and everlaſting happineſs: and the knowlede of Almighty God, ſo far as it is attainable by our narrow created Underſtanding, highly advanceth the humane Underſtanding upon all accounts, and infinitely excels the knowledge of any other Object in the world, upon theſe enſuing accounts among many others.

Firſt, It is a knowledg of ſuch an Object that hath the greateſt and moſt convincing certainty in the world, a certainty that he is, and in a good meaſure a certainty what he is; for though it be impoſſible for any or all the created Beings in the world, to attain a diſtinct, perfect and full *Idea* of the Divine excellencies, in their full, adequate, diſtinct perfections; yet that Image that he hath given of himſelf, in the admirable Frame of ſo much of the world which we know, doth with all imaginable certainty evince, That he is, that he is but one, one moſt intelligent, wiſe, powerful, free, good, ſimple, eternal, infinite and moſt perfect Being, the Fountain of Being, and the firſt Cauſe of all things, though we cannot attain the full comprehenſion of that perfection: And truly it is no ſmall evidence of the Divine Wiſdom and Goodneſs, That that great and important Truth of the being and perfection of Almighty God (the Principle and Object of the greateſt importance in the world to the good of Mankind, and for the advance and perfecting of humane Nature) ſhould be written in ſuch plain, clear and evident Characters in the Works of Nature, and evinced by Evidences riſing from thence, as are obvious to any perſon that hath but the common uſe of Reaſon, and the honeſty to uſe and exerciſe it ſincerely.

Secondly, It is the moſt noble and excellent Object in the world, and that may and doth moſt enoble and advance the intellective Faculty; he is the Fountain of all Being, and of all Perfection: Thoſe Excellencies that are in the nobleſt created Natures in the world, are but ſhadows of that perfection that is in him: Though a created Underſtanding can never take in the fulneſs of the Divine Excellencies, yet ſo much as it can or doth receive thereof, is of greater extent, uſe and value, and doth more advance and enrich the Faculty, than any other Object in the world, though that other Object were fully and adequately known.

Thirdly, Although the Underſtanding can never ſearch out the Almighty to perfection, by reaſon of the infinite exceſs of this Object, beyond the capacity of a created Faculty, yet there is that congruity between this Faculty and this Object, that connatural ordination, as it were, of Intellective Faculty to this Object, as if it were (if not only, yet principally) lodged in the humane Nature for the ſake of this Object; ſo that though there is no commenſurableneſs between this Object and a created Underſtanding, yet there is a congruity and connaturality between them: And hence it is, that ſo much as we do or can know of God, is delightful and grateful to the Underſtanding. And

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though this abyss of excellency be infinite, yet it doth not confound, nor disorder, nor overwhelm the Understanding in its modest and due searches into it: And besides, although the perfection of his Essence, and many of his Attributes, as Infinitude, Immensity, Indivisibility, *&c.* do dazle our Understandings, yet some of his Attributes, and the Manifestations thereof, are not only highly delectable to the Intellective Faculty, but are sutable and easily conceptible by us, because apparent in his Works, as his Goodness, Beneficence, Wisdom, Power, *&c.* if we attend to it.

And certainly it was the great Goodness and Condescention of the Glorious God unto his Creature Man, that when he knew all his own Excellencies were too great and too bright for us to see, he hath been pleased to discover so much of himself as was fit and necessary for us to know, by means that our Faculties might use without dissipation, distraction, or too great astonishment; namely, first, By his Works, reflecting his Greatness and Goodness. Secondly, By his Word, by Divine Revelation discovering his Goodness, Mercy, Power and Truth. Thirdly, By his Son, through the Vail of our Flesh; by all which that Brightness and Splendor of the Divine Excellence, that by an immediate intuition or exhibition would have overwhelmed our Intellective Faculty (as it stands united to our Bodies) is presented to us more proportionately to our Capacities and Faculties, by a kind of refraction, and a more easie and familiar manifestation.

Fourthly, It is the most useful Object of our Knowledge that can be; and in comparison of this, all other Knowledge is vain, light and impertinent; and indeed all other knowledge is valuable upon this single account, by how much it gives us a manifestation of the Divine Excellencies, and leads and conducts to the knowledge of Almighty God and his Attributes. If I consider my self in this Life, there is not a moment which I live, or wherein I have any contentation, or comfort, or convenience, but all this I have from his Influence and Bounty; and certainly it concerns me highly to know my Benefactor, from whom I receive my Good, that I may depend upon him, be thankful unto him, propitiate him, and make my applications to him for what I want. Again, the wisest men that have searched after happiness in this Life, though they have missed of the place where it is to be found, have with great reason placed the best happiness that can be found on this side Death, either in Virtue and the exercise thereof, or in Tranquillity of mind, or in both, for they are rarely asunder. Now I may be an excellent Mathematician, a man well seen in Natural Causes and Effects, an excellent Statesman and Polititian, and yet be without that Goodness that may denominate me justly a good man, and without that tranquillity of mind that may make me a happy man: but the true knowledge of God, seriously and really dwelling and digested in the Soul, makes a man a good man, and a happy man; it makes a man to love, fear, honour and obey him that he thus knows. A man cannot truly know him, but he must know that in him, which by a moral necessity raiseth in a man those Habits and Dispositions, namely, of Religious Piety towards God, Justice and Righteousness to men, Sobriety in relation to himself; for in knowing this God, he knows that these things are well-pleasing to him, and the contrary

trary displeaseth him, and he knows him to be a God that knows all things in the world, and that is a bountiful Lord to them that love and obey him, and a just Judge of them that despise or forsake him. And as thus it makes him good, so it makes him happy, by giving him the highest and most firm Tranquillity of Mind that can be; for he knows that this most gracious and powerful God orders and governs all the things in the world with irresistible power, exquisite and infinite wisdom, and abundant goodness, and that he is well pleased with them that love, fear and obey him; and upon all these accounts a man rejoyceth in his Favour, depends upon his Power, Goodness, Wisdom and All-sufficiency, resignes himself to his Will; is contented and patient under all conditions, and so doth enjoy perfect tranquillity of Mind.

But this is the lowest portion of the usefulness of Divine Knowledge. There is another Life after this, a Life of eternity, and the influx of the knowledge of God in relation to this everlasting Life, is infinitely of more moment; it fills the Soul with a capacity of it, with a sutableness and state of congruity to it, with those preparations, dispositions and habits that are necessarily pre-requisite for it, and gives him the fruition and perfect enjoyment of it: That measure of the knowledge of God that we attain, is the best happiness we enjoy in this Life, and the perfection of our happiness in the Life to come, where we shall have a more perfect intellectual Vision of the Glorious God, and as full a fruition of the Goodness of God, as that elevated Nature which we shall then have, can be capable of: Then that measure of the knowledge of God which we here acquire, shall be refined and advanced to a degree of perfection sutable to the advance that this Intellective Faculty shall then receive; and that measure of goodness that by the means of that knowledge is wrought in the Soul in this Life, shall then be improved to a higher degree of excellence, and rewarded with a weight of Glory.

This Knowledge therefore of all other Knowledge is to be preferred: And in all our busie inquisitions touching other things, we must remember our selves, as our Lord remembred *Martha* in the Gospel. We are busie about many things, and trouble our selves with many Enquiries; but there is one thing, one Object, and the knowledge thereof necessary, namely, the knowledge of the glorious God: *This is life eternal, to know thee the only true God, and Jesus Christ whom thou hast sent,* John 17. 3. Whatever therefore we endeavour to know, it must be with subordination to the endeavour after this knowledge: And as far as is possible, all other knowledge, and desire thereof, should be directed to the improvement of this Knowledge, or in order to it, and to the end acquirable by it.

The second profitable and useful Object of our Knowledge, is, the the Knowledge of our selves: And next to the Knowledge of Almighty God, and his Will, and his Son, this Knowledge of our selves, seems most worthy of our endeavour: And therefore I have chosen this Subject for my search and examination at this time: For in this Subject we shall find all those Qualifications or Requisites before-mentioned, that commend any Subject to our Enquiry or Knowledge.

Of any one visible Subject in the compass of created Nature, there is none

none that we know and are acquainted with, that hath more worth and excellency next to the great Creator of all things, and the holy Angels; and that which ſeems to be moſt noble, the Image of the glorious God; namely, the Univerſe, as it comprehends the Syſteme, Order and Excellencies of all created Beings, digeſted into their ſeveral Ranks and Orders, and collected and put together into that glorious Frame of the Univerſe: But as it is impoſſible for us, at leaſt in this Life, by any means to be acquainted with all the Integrals of that glorious Structure, ſome are in their nature imperceptible by our Senſe; namely, the Spiritual Beings; yea, and the more refined parts of material Exiſtences, which by reaſon of their ſubtilty, eſcape our perception: Other parts thereof are ſo remote, that although they might in their own nature be perceived by Senſe, yet they are at that remote diſtance from us, that they eſcape our Sight, though the moſt active Senſe we have. And again, the vaſt extent of the Univerſe is ſuch, that though we might ſucceſſively ſee the parts of it, yet it is not phyſically poſſible to ſee it at one view; and conſequently impoſſible to ſee at once that beautiful and glorious Image of the more beautiful and glorious God in its full complement repreſented in the entire Frame of the Univerſe.

Again, we cannot but ſuppoſe that there are divers Ranks of created Beings intermediate between the glorious God and Man, which far ſurpaſs man in perfection of Nature and Operations; as the glorious Angels, and created Intelligences; nay poſſibly there may be material Beings of a more refined ſubſtance, and endued with more advanced Forms than ours. Who knows whether the Stars are not furniſhed with intellectual Creatures more excellent for their Subſtance and Forms, than we Mortals? Yea, and for ought we know, the Stars themſelves may have Forms appropriate to them, of a more excellent frame than ours; though, as I have before ſaid, this exceeds our determination.

But although theſe things may be, yet we know not that they are; and if they were, yet we are unacquainted with their natures and kinds; only the reality of exiſtence of Angelical Creatures, and created ſeparate Intelligences, and the poſſibility of Nobler Creatures or Natures than ours, reſiding in ſome parts of the Univerſe, may teach us not to be ſo over-prizing and over-valuing our ſelves, as to think that there are no other Creatures intermediate between God and Man, of a greater perfection than Man. We ſee a multitude of Creatures between us and the loweſt rank of Animals ſpecifically and gradually one below another; and doubtleſs there are, or may be, many ranks of Beings intermediate between the glorious God and Mankind, that have ſpecifical gradations one above another.

But whatever may be ſaid touching theſe, yet certainly of all the viſible Creatures that we are acquainted with, Man ſeems to have a very great Prerogative of excellence. And though he may not bear ſo fair and ſo noble an Image of the Divine Glory as the Univerſe in its full Syſteme and Order, or as thoſe nobler Beings that are of a Rank and Nature above him, yet certainly he bears a greater meaſure of the Divine Image, than any one viſible Creature we know; and ſo far forth as we know: God himſelf affirms thus much of Man, that he created him after his own Image; which he ſayes not of any of the Celeſtial Bodies themſelves;

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Gen. 1. Man therefore is a Creature, that of all visible Creatures that we know, is the noblest.

We may observe in the Creatures of a subordinate rank to us, how the more inferiour and ignoble bear somewhat of the Image of the superiour, a kind of shadow or adumbration of those perfections that in the superiour are more perfect, not only by a gradually, but specifically differing perfection. We see in some Metals an Analogical resemblance of those vital effects of Vegetables, growth, digestion and augmentation that is more perfectly in Plants and perfect Vegetables: We see in Vegetables a resemblance of Appetition, Election, Generation, and in some of them an imperfect Image of that universal sense of Feeling which we find more perfectly in Animals: We find in Animals, especially some of them, as Foxes, Dogs, Apes, Horses and Elephants, not only Perception, Phantasie and Memory (common to most, if not all Animals) but something of Sagacity, Providence, Disciplinableness, and a something like unto a Discursive Ratiocination, bearing an analogy, image or imperfect resemblance of what we find, though in a degree, specifically more excellent in the humane Nature, insomuch that *Porphiry*, *Plutarch*, *Sextus Empericus*, *Patricius*, and some others have been bold to make reasonableness not the specifical difference of the Humane Nature; and some latter persons would not have the Definition of a man to be *Animal Rationale*, without the addition of *Religiosum*; wherein he seems particularly to exceed the Brutal Nature: Although in truth that which seems to be Reason in the Brutes, is nothing else but the Image and Analogical representation of that true Reason that is in Man, as the Water-gall is the Image, Shadow, or weak Representation of the Rainbow.

And we have reason to think that that intellective and volitive power which is in Man, bears an Image and Representation of the like power that is in Angels and separate Intelligences, though neither of equality to that perfection that is in them, either in degree or kind.

And although it were too great presumption to think that there is any thing in any created Nature, that can bear any perfect resemblance of the incomprehensible perfection of the Divine Nature (very Being it self not predicating univocally touching him and any created Being and Intellect, and Will, as we attribute them to God, are, as we may reasonably think, not only of a Perfection infinitely transcending any created Intellect and Will, but of another kind and nature from it) yet though we are not able to comprehend the excellence of the Divine Nature, we cannot frame unto our selves a conception of him without the notion of Intellect and Will, though infinitely perfect: It seems that those two great Faculties in us, bear a weak Analogy with, and Representation of the Divine Nature. And therefore in that respect, Man is the Image and Representation of the Glorious God, though the disproportion between him and this his Image, be infinitely more than the disproportion between *Cæsar* and his Image upon his Coin, or the Sun in the Heaven, and the Shadow of him in a Bason of Water.

And in this respect, the Humane Nature is a worthy and noble Object of our Enquiry and Knowledge, because here is the best visible Image of Almighty God that we can fully acquaint our selves with, next to him that was the Brightness of the Fathers Glory, and express Image of his person, Christ Jesus our Lord.

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And beſides this relative conſideration of the Humane Nature, with relation to thoſe Beings that are above him, Man is an excellent Object of contemplation; ſo if we look upon him either abſolutely in himſelf, or with relation to Creatures of an inferiour nature, he is a worthy and noble object of our contemplation.

If we conſider him abſolutely in himſelf, he is an Object worthy of our contemplation; he is admirable in excellent compoſure and figuration of his Body, and in every part apart, and in the whole ſtructure put together, admirable in the Nature, Faculties, and Excellence of his Soul, admirable in the conjunction of both together, admirable in all the operations of Life, Senſe, Intellect and Will, which he exerciſeth in this ſtate of conjunction and union, admirable in his production and generation, and admirable as to the condition of his Soul in its ſtate of diſunion and ſeparation. The ſpeculations concerning him, are all full of great variety, curioſity and worth, becauſe the Subject it ſelf is ſuch.

If we conſider him with relation to other created Beings of an inferiour nature; Firſt, he comprehends all the excellencies that are in the inferiour ranks of Being, and that for the moſt part in a more excellent and perfect manner: The Life that is in Vegetables, and the operations of that Life; the Life and Senſe that is in Senſibles, and the excellent operations of them, all Senſation, Perception, Memory, Phantaſie, Nutrition, with its ſeveral proceſs, the faculties of Appetition, Paſſion, Generation; The diſpoſition of Parts and Organs that are beſt in any Animal, are to be found in the diſpoſition, order and texture of the Body of man; and wherein it differs, it differs with much advantage and prelation over the ſtructure of the Bodies of Animals; ſo that the knowledge of Man gives us a full account of the excellence of others, either Animals or Vegetables: He that well knows Man, knows whatſoever is excellent in the Animal or Vegetable Nature. Secondly, Beſides theſe Excellencies common either to the Vegetable or Animal Nature, and Man, there are certain excellencies ſuperadded to the Humane Nature, certain ſpecifical prelations in his Body, the Structure, Poſture, Beauty and Majeſty thereof, certain ſpecifical excellencies and uſefulneſs in ſome of his Organs, the diſpoſition of his Hand, Brain, Nerves and other Integrals: Again, the ſpecifical Excellencies of his Soul in thoſe great and admirable Faculties of Intellect and Will; Of all which in their due time: So that he that is well acquainted with, and knows Man, knows whatſoever is excellent in the Vegetable and Animal Nature, and much more.

So that upon the whole account, we have a Noble and Worthy Object of our Contemplations, in the contemplation of Man.

2. In the contemplation of Man we have an Object that doth not overmuch confound us with its exceſſive multiplicity; and yet it doth not ſatiate, nor proves ingrateful for want of ſufficient variety: Touching the former of theſe, it hath been before obſerved, that he that goes about to make the whole Univerſe and all the ſeveral parts thereof the buſineſs of his Enquiry, as he ſhall find that there are many things therein that he cannot come at, or make any diſcovery of, ſo among thoſe parts of the Univerſe that are objected to a greater diſcovery of our Senſes, the multiplicity is ſo great, that a man of the moſt equal and firm conſtitution, muſt deſpair of Life enough to make a ſatisfactory, particular and deep en-

quiry into them: But the Object in hand is but one; it is Man, and the Nature of Man.

I confeſs it is true, that he that ſhall make it his buſineſs to take in as it were, by way of a common place, all thoſe things that may be taken up under this conſideration, and follow all thoſe Lines that concenter in this, or almoſt any other the moſt ſingle piece of Contemplation, will make this Subject large enough; and upon that account may be drawn in almoſt all things imaginable: We find in the conſideration of the Humane Nature, a Subſtance, a Body, a Spirit: We find the ſeveral Objects of his Senſes, Light, Colour, Sound, and infinite more: He that upon this account will take in the diſtinct and large conſiderations of theſe and the like Appendices to Humane Nature, in their full amplitude, will have a large Plain, that will more than exhauſt his Life, before he come to the Subject it ſelf which he deſignes. Again, there is an infinite multitude of collateral conſiderations that yet are relative to man, hither comes all the conſiderations of Theology, Phyſick, Natural Philoſophy, Politicks, the conſiderations of Speech, Government, Laws, of Hiſtory, Topography, of Arts, of thoſe Sciences that relate to the Senſes, of Opticks, Muſick, and infinite more; for all theſe have a relation to Man, and are like ſo many Lines drawn from ſeveral Objects that ſome way relate to him, and concenter in him; and he that ſhall make it his buſineſs to follow all thoſe Lines to their utmoſt, ſhall make the contemplation of Man almoſt as large as the contemplation of the whole Univerſe.

When I ſay therefore the contemplation of Man is the contemplation of a ſingle Object, I mean, when it is kept into thoſe ſingle bounds of Man in his own ſpecifical Nature, and under the phyſical contemplation of his Nature, Parts and Faculties, as they are appropriate unto him. And then it is a Subject that we may poſſibly make ſome progreſs in its contemplation and conception within the period of the time, that by the ordinary time of Life, and the permiſſion of neceſſary avocations, a man may employ in ſuch a contemplation.

And yet ſecondly, though in this reſtrained notion, the Subject ſeems to be reſtrained and ſingle, we ſhall find it no very narrow Subject; but there will be buſineſs enough in it to employ our Faculty, and to take up that time, which either more neceſſary, or more importunate thoughts or employments will allow us; and variety enough to entertain our thoughts with delight, contentation and uſefulneſs.

3. The Third Commendation of this Object to our contemplation, is this, that therein we have more opportunity of certainty and true knowledge of the Object enquired into, than we can have in any other Object, at leaſt of equal uſe, worth and value: Many excellent things there are in Nature, which were very well worth our Knowledge, but yet, as hath been ſaid, either by reaſon of their remoteneſs from us, unacceſſibleneſs to them, ſubtilty and imperceptibleneſs to us, either are not at all ſuſpected to be, or are not ſo much as within any of our Faculties to apprehend or diſcover what they are; or in caſe we have any conception that there may be ſomething of that kind, yet our Notions touching them, are but products of Imagination and Phantaſie, or at beſt, very faint, weak, ungrounded and uncertain conjectures, and ſuch as we

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can never prove to the satisfaction of others or our selves.

Our Sense is the best evidence that we have in Nature, touching the existence of corporeal things without us, and where that is not possibly to be exercised, we are naturally at a great uncertainty whether things are, or what they are. Now the Understanding perceives or understands things by the assistance of Sense in a double manner. 1. It either perceives them immediately, as being immediately objected to, and perceptible to the Sense; as I perceive the Sun and the Stars by my sight; I find that there is a Body hard or gentle, or hot or cold, by my Touch; and accordingly my Understanding judgeth of them: Or secondly, though the Sense perceive not the Object immediately, yet it doth represent certain sensible effects or operations; and though by those effects or operations the Understanding doth not immediately conclude any thing else to be, but what the Sense thus feels or sees; yet the Understanding sometimes by ratiocination, and sometimes by the Memory doth infer and conclude something else to be besides what the Sense immediately represents either as the cause or the concomitant of it, and doth as forcibly and truly conclude the thing to be, and also sometimes what the nature of that cause or concomitant is, as if it were seen by the Eye, or felt by the Hand.

I do not see, nor by any Sense perceive the quiet, undisturbed Air; yet because I do see that a Bladder, that was before flaccid, doth swell by the reception of that which I see not, I do as truly and certainly conclude that there is such a subtil Body which we call Air, as if I could see it as plain as I see the Water: I do not see the Animal or Vital Spirits, neither can they, by reason of their subtilty and volatileness, be discovered immediately to the Sense; yet when I see that forcible motion of the Nerves and Muscles, I do as certainly conclude, there are such Instruments which the Soul useth for the performance of those motions, as if I saw them: I come into a Room where there is no visible or tangible Fire, yet I find by my Sense the Smoke ascending, I do as forcibly conclude that Fire is or hath been near, as if I saw it; because my sensible experience and memory tells me they are concomitant. Upon the same account it is, that when my Sense and sensible experience shews me that these and these effects there are, and that they are successively generated and corrupted, though my eye sees not that God that first made those things, yet my Sense having shewed me these sensible Objects, and the state and vicissitude of them, my Understanding doth truly conclude that all this vicissitude of things must terminate in a first cause of things, with as great evidence and conviction, as if my Sense could immediately see or perceive him: So that in the ordinary way of Nature, and without the help of divine Revelation, all our certainty of things natural, begins at our Senses; namely, the immediate sense of the things themselves, or the sense of those effects and operations which after by the help of the Understanding are carried up to the discovery of things not perceptible by Sense immediately.

Now there may be many things in Nature unto which we can have neither of these accessions of Sense: How many Stars are now discovered by the Telescope, which were never before known, because not perceived by Sense? And how many more there may be, which are not visible to us by that help, we cannot yet know till that discovery: We

cannot know what the extent of the Univerſe is, whether there be any Worlds without the compaſs of this; whether the Heavenly Bodies are inhabited, and with what Creatures: We cannot know the Nature, Conſtitution, Faculties of created and ſeparate Intelligences, nor the manner of their *Ubi*, Motion, Intellection, mutual Intercourſe, or detection of their Minds: Theſe things are out of the reach of our Senſe either mediately, or immediately; and conſequently without the help of Divine Revelation, we can never upon a natural account, come to any certainty in them; or the moſt we can otherwiſe know, is by conſidering the reflexed acts of our Underſtanding, whereby we know many acts of our own minds and Soul, which are not perceptible to our external Senſes; and upon that account, we may think that there their perception may be ſomething analogical: But Man is an Object of greateſt vicinity to himſelf, and hath thereby, and by other contributions, the beſt opportunity to know and underſtand himſelf with the greateſt certainty and evidence.

And yet it cannot be denied, that notwithſtanding this great proximity of Man to himſelf, yea, and notwithſtanding the many and great Eſſayes, Attempts, Enquiries and Obſervations that have been made in all ſucceſſions of Ages, by men of excellent Parts, Learning and Induſtry, we ſtill remain, and are like ſtill to remain ignorant of many things of importance concerning our ſelves: The great and wiſe God whoſe Glory it is to conceal a matter, having lodged many things in the Humane Nature, and Fabrick, and Conſtitution thereof ſo ſecretly and ſo cloſely, that notwithſtanding the Experience and Obſervation of near 6000 years, and the ſearch and induſtry of the beſt Judgments in all Ages, and the cloſe proximity of Man to himſelf, there are very many things in our Nature, whereof we neither can, and probably never ſhall be able to give any account to our ſelves or others, with any evident, nay with any tolerable certainty; as if the Divine Wiſdom meant hereby to give to the Children of Men an inſtance to keep them humble, that cannot find out the certainty of what they hourly moſt intimately converſe withal; and an indication of his own profound and infinite Wiſdom, that can thus keep ſecret thoſe things, which in regard of their proximity to us, we have great opportunity to know.

And of this nature are many things which we know to be, but we cannot give our ſelves any ſufficient explication of the manner or reaſon of them. We are certain we have a vital, active Principle in us, by which we ſee, underſtand, remember; which we call the Soul. But whence that Soul comes, or how, and when, and in what manner it is united to the Body, whether it be extended with the Body, or indiviſible, and in every point of the Body, how and in what manner it exerciſeth its nobler acts of Intellection and Volition, or how far forth it ſtands in need of the Organs actually to exert any of thoſe operations; or how far forth it doth or may exert them without it: how or by what means the *ſpecies* not only of ſenſible Objects, but even of Notions of the Mind are preſerved in the Memory without confuſion and diſſipation, notwithſtanding lapſe of time, and intervention of infinite variety of Objects: whether it be the ſame individual principle that exerciſeth the acts of Intellection, and likewiſe of Senſe and Vegetation; and if it be, what become of theſe Faculties ſubſervient to a temporal Life, in the ſtate

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of ſeparation of the Soul: where it is that the exercise of Senſe is performed; whether in the Brain, or by the Soul, by the mediation of the Spirits in the extremity of the Nerves; and if the former, how the *Species* of Viſibles are carried through thoſe dark Caverns between the *Organ* and *Cerebellum*, ſuppoſed to be the Seat of the common Senſe. Theſe and many more difficulties, ſcarce explicable with any ſufficient certainty, do occur in the little Shop of the Fabrick of Humane Nature. We muſt not therefore think, that becauſe of this nearneſs to our ſelves, all the *Phænomena* of our Nature can be rendred as evidently explicable as we do or may underſtand the Fabrick of our Hand by Anatomical Diſſection.

But though this vicinity of our ſelves to our ſelves, cannot give us the full proſpect of all the Intrigues of our Nature, yet we have thereby, and by other opportunities, much more advantage to know our ſelves, than to know other things without us, and by that opportunity of knowing of our ſelves, to know the truth or falſhood, or analogy of very many things without us, which otherwiſe could not be ſo well known or explicated.

1. We have hereby an opportunity to know the Conſtitutions, Frame and Order of our Bodies: It is true, the great advance of the practice and skill of Anatomy hath laid open to ocular inſpection the Fabrick of the Bodies, as well of Brutes and Birds, as Men; and therein they ſeem to be equally obvious to our knowledge: But a Brute or a Man are another thing, when they are alive, from what they are when dead: Anatomy can give us the Poſition, Frame, Situation, Figure and connexion of all the ſeveral Integrals of the Body of Man or Beaſt; but it is the living Mans obſervation of himſelf, that muſt give account of thoſe Vital motions that are in the Body when living; as the Pulſations of the Heart, the Circulation of the Blood, the Communication of the Parts, the Congruity or Diſagreement between my Nature and other things variouſly qualified: The Humor that ſeparates, divides, attenuates and digeſts the Nouriſhment; the ſeveral exertions of the ſeveral Organs relating to their ſeveral Functions, the things that impede or advance the vital or ſenſible operations in a man, what impreſſions are made upon the Blood and Spirits by the ſeveral paſſions of the Mind, what things increaſe or advance the Spirits, what diſorder or diſcompoſe them; the immediate and agil ſubſervience of the Spirits to the Empire of the Mind or Soul. Theſe and infinite more touching the Body, are diſcoverable by Obſervation, and by no other Obſervation, ſo well as by a mans Obſervation of himſelf.

2. We have hereby an opportunity to know much more of the Nature, Operations and other things relating to our Souls, than we can touching other things or Natures. There hath been much Diſpute among Learned men, concerning the manner of the Intellection of Spirits and Intelligences; and by others, touching the knowledge of Brutes, touching their remembring Faculty, whether they have a kind of Diſcurſive Faculty, which ſome call Reaſon; whether they do preſcind or abſtract touching their Voyces; how far they are ſignificant, and whether they intentionally ſignifie by them, how far their Animal motions are ſpontaneous, or meerly mechanical, and which are of one kind, which of another; or whether, as *Des Cartes* would have it, all are purely Mechanical.

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Many vain things have been asserted by men that would be counted eminent Wits; but without debating in this place the truth of any of these things, it is no marvel if we are to seek what are the manner of these operations of abstract Spirits or Brutes; we cannot know them, unless we were in them, so as to be acquainted with their inward motions, or at least, unless they had some such way of communicating their Perceptions and Phantasms unto us, as we have to our selves, or one to another: But whatever can be known of them, we may easily by inspecting and observing our selves, know much concerning our own Souls and the operations of them: We may know that we have a principle within, which we do, as it were, feel distinct from our Bodies, whereby we think, and we know we think; whereby we do discursively, and by way of ratiocination deduce one thing from another; whereby we abstract, divide and define, whereby we have notions of things which were never derived to us by Sense, as the Substance or the *Substratum* of those Accidents of things which are derived to us by our Sense; whereby we do correct the errors of our Sense, and judge otherwise touching things represented, than the Sense represents them. The Sense represents the Sun no bigger than a Bushel; there is somewhat within us tells, and that truly, that it is bigger than the Earth, because we find Distance diminisheth the appearance of Bodies: Our Sense tells us that the representation in the Looking-Glass, hath all the motions, the bulk, figure, colour of that corporeal *Moles* it represents, and represents the same under all the renditions of a Body, as it doth the thing it self reflected; but there is that within tells us, and that truly, that it is but a meer shadow, and no real *Substratum* under that appearance of any such corporeal *Moles:* We do most certainly know that there is that within us, that doth exercise a rational Empire over our passions and sensual appetite; that believes, hopes and acts in order to ends that respect another Life than that of Sense, We do find, as it were, the principal seats of these operations, we feel our selves to understand in our Head, and that we will, and resolve, and love, and hate, and pity in our Heart, almost as plainly as we find our selves see with our Eyes, or hear with our Ears: I feel the propensions and inclinations of my Mind as really as I feel my Body to be cold or warm. I find in my self that this inward principle doth exert many of its actions intentionally and purposely; I resolve and cast about to remember things that I would remember; I cast about for all circumstances that may revive my Memory or Reminiscence: When I command any Muscle of my most remote Limb to move, it doth it in an instant; in the moment I will it; and hereby I understand the motions of my Mind are no way Mechanical, though the motion of the Muscle be such; I move, ride, run, or speak, because I will do it, without any other physical impulse upon me, and when I see many analogal motions in Animals, which though I cannot call them voluntary, yet I see them spontaneous; I have reason to conclude that these in their principle are not simply mechanical, although a Mouse-trap, or *Architas* his Dove moved mechanically, from an artificial principle. And because I find that the remotest Muscle in my Body moves at the command of my Will, and since I see the energy of my Soul in every particle of my Body, though not using intellectual actions in every part, yet using some that are imperate, as Local Motion;

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ſome that are natural and involuntary, as the Pulſe of my Heart, the Circulation of my Blood, my Digeſtion, Sanguification, Diſtribution, Augmentation: And becauſe at the ſame time I underſtand, conſider, determine, ſpeak, walk, digeſt, and exerciſe, as well intelectual, imperate and involuntary actions, and all from the ſame vital Principle, though operating differently in ſeveral Faculties and Operations: I therefore experimentally feel that my Soul, though it hath the reſidence of the exerciſe of his nobler Faculties in my Head and Heart, yet it pervades my whole Body, and exerciſeth Vital Offices, proportionate to the Exigences or Uſe of every part, the Fleſh, the Bones, the Blood, the Spirits, Nerves, Veins, Arteries, Seminal Parts; and this I feel to be through my whole Body, and if I find any part of my Body be ſo mortified as it becomes like a rotten Branch of a Tree, whether it be Nerve or Joint, whereby that principle cannot communicate it ſelf to it, it putrifies and corrupts, and is not participant of the motion or influence derived from my Soul, becauſe it is now no longer in it to quicken it. And as I find my whole Body the Province or Territory of my Soul, in which it univerſally acts according to the different organization and uſe of every part, ſo I find that my Soul, as to its ſubſtantial exiſtence, is confined within the precincts of it, and doth not phyſically act without it; and by all this I learn, that my Soul, if it be a Spirit, may be circumſcribed within the compaſs of a determinate ſpace, that though it be a Spirit, yet its operations while it is in the Body, may be, if not altogether, yet in a great meaſure, organical. I underſtand, remember and reaſon better in my health, than in my ſickneſs; and better in my riper years, than when I was a Child, and had my organical Parts leſs digeſted and inconcocted: And though it be a Spirit, yet I find it is no inconvenience to have ſome analogy, at leaſt of co-extenſion, with my Body. And although it may be a ſimple Spirit, and univocally and eſſentially the ſame, as well in my Toe, as my Head, yet according to the variety of the diſpoſition and organization of the ſeveral parts of my organical Body, it exerciſeth variety of operations; the ſame Soul that underſtands in the Brain, and ſees in the Eye, and hears in the Ear, neither underſtands, nor ſees, nor hears in the Fingers, but moves and feels.

Theſe and many ſuch Perceptions I have touching that principle of Life, Senſe and Intellection within me; and of theſe I have as great a certainty as poſſibly I can have of any thing in the world. Firſt, Although I cannot immediately have any immediate ſight of my Soul, or of its immediate operations, or internal actings, yet I ſenſibly ſee and feel the effects thereof with as great an evidence and demonſtration that it is ſuch, as if I ſaw the Principle it ſelf, and its immediate operations. I ſenſibly ſee and feel that my Hand or Foot moves upon the command of that principle within me: And when that principle is removed by a total deprivation, as Death; or by a partial deprivation, as in a mortified Limb or Member; or by a temporary ſuſpenſion, as in an *Apoplexy* or *Deliquium Animi*; I am ſure there is no ſuch motion, becauſe that principle is abſent in Death, or its operation ſuſpended in caſe of ſuch Diſeaſes: It was therefore a principle that was within, diſtinct from my Body, that while it was there, exerted this Empire, and was obeyed in it. Secondly, In thoſe actings of my Soul, which are not in themſelves perceptible by any ſenſi-

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ble effect, yet I have as firm and certain an evidence that they are such, as if I had a sensible perception of them: When I think, or understand, or remember, or abstract, or divide, or define, or purpose, or will, it is most certain these effects or intrinsick operations of my mind are not possibly perceptible by my sight, or hearing, or taste, or smell, or feeling; they are objects of such a nature, that fall not under any perception of any of those Senses; yet I am as certain, if not much more certain, that I do think, or remember, or abstract, or reason, or resolve, or will, as that I hear, or see, or feel; and I do as certainly know before I write, what I am now writing, that I think or reason touching the things I am writing, or that I resolve or purpose to write them, as I am certain that I have written them when I have written them; for the motions of my mind are as certainly obvious to a perception in me answerable to them (which I call the reflex act of the Soul, or the turning of the intellectual eye inward upon its own actions) as the motions or rather passions of my Sense are certainly obvious to my Sense; I see the Object, and I perceive that I see it: And therefore though he was a little too positive that said, *Ego cogito,* was, as it were, the *primum cognitum,* yet certainly herein he was irrefragably true, that there cannot be any thing more certain and evident to a man that thinks, than that he doth think; and yet that Thinking is not perceptible by any of our five Senses. Thirdly, But there is yet a farther opportunity of very much certainty in that knowledge that a man may have of himself, and of those things concerning himself; by that conversation, by the help of speech or signs that he hath, or may have with other men. Man only, of all visible Creatures, having this priviledge of communicating his thoughts and conceptions by instituted signs of speech or writing; and by this a man acquires a threefold superadded certainty of what he may or doth know concerning himself: Namely,

1. He thereby knows that there is a specifical Identity between him and other men, and that they agree in one common rational Nature; for by mutual speech we find that we have both alike an intellective, discursive Faculty, as I do reason, so doth he; as I divide, define, abstract, purpose, determine, will, so doth he use the like operations of his Mind; and although oftentimes interest and misapprehension make us differ in our conclusion, yet he endeavours to maintain his Conclusion by the like method of Reason and discursive Ratiocination as I do; and most times when prejudice and misapprehensions are removed, that which seems reasonable to him, seems so to me; whereby it appears that we concenter in one common Nature, and that the Principle of Reason and Reasonable Soul is common to us both, and that we meet in one common rational Nature.

2. He likewise knows that as they concenter in one common rational Nature, so every one of that *Species,* hath yet an individual Principle of his own, that individuates, and personally discriminates one from another: For till we mutually communicate our thoughts by instituted signs, he knows not what I think or purpose, nor I what he thinks or purposeth.

3. This adds a certainty to me that I am not deceived in those reflections that I make upon my self, and the collections I make from them;

them; for as I do find I think, I reason, abstract, divide, define, purpose, so I find by the help of Speech and Signs that he hath the very like internal operations; and as I do find that those do arise from a principle different and distinct from that *moles Corporea* which I have, so I find that he hath the same perception of the original of these internal operations, and attributes them to a Principle in him distinct from the Body: So that if I might have any imaginable doubt of those reflexed perceptions which I have touching those appropriate operations of my own Mind, I am confirmed in them, because I find the like perceptions in all the men I converse with. And thus far touching the third Commendable in the search of our selves, namely, Certainty and Evidence.

4. The fourth advantage of this subject and the knowledge thereof is, the profit and usefulness thereof: Next to the knowledge of Almighty God, and our Blessed Saviour, and the Sacred Scriptures, there is not any subject in the World that is more necessary and useful to be known than the Humane nature, with those incidents that do necessarily fall into that consideration; and of all the knowledge that relates to man, there is nothing of greater moment or use to be known than Man under the Physical notion of his Body and Soul, and both united together. And the usefulness of this Consideration distributes it self into these two kinds; Usefulness in reference to Speculation or Knowledge, and Usefulness in relation to Practice or Exercise.

1. Touching the Speculative Usefulness there is this to be said, that there is in the contemplation of Man a means of discovery and explication of very great and momentous truths. And although possibly the very same truths may be elicited, and in some measure explicated by parallel *Phænomena* in the contemplation of Animals, yet they are more clearly and eminently evidenced in the contemplation of Man, who, by how much the more excellent and noble a Creature he is above Brutes, and by how much he is the more observable to himself than they can be, by so much the more useful and excellent is the knowledge of himself.

Now these Speculative truths which I shall chuse to instance in shall be these.

1. The due contemplation of the Humane nature doth by a necessary connexion and chain of Causes, carry us up to the unavoidable acknowledgement of the Deity; because it carries every thinking man to an original of every successive individual thereof by a course of generation, till it come to a common Parent of the whole *Species*, the immediate workmanship of the Glorious God.

2. Consequently, it gives every considering man a sound and full conviction that the efficient of this first Parent of Mankind, is a most wise, most powerful and beneficent Being. For the true prospect of the Humane Fabrick in its essential and integral parts, in the fabrick of his Body, and the faculties and operation of his Soul must needs convince any man of ordinary reason, that can observe but clear and evident consequences, that the Efficient that first made this first root of Mankind was not only an intelligent Being, but a Being of most admirable Power, Wisdom, and Goodness; for such this effect doth necessarily declare its Efficient to be.

3. As the contemplation of the Origination of the *Species* of Mankind gives us an assurance of the Existence of the first Cause, and of his Attri-

bute of Wiſdom, Power, and Goodneſs; ſo the contemplation of the ſecondary origination of Mankind, or the production of the Individuals by generation gives us an evidence of the like power, wiſdom, and goodneſs of God, and a little Emblem of the Divine Power in the Creation of the World. Any man that attentively conſiders the progreſs of the generative production of mankind, will find, that this goodly and noble Creature called Man hath its gradual formation and complement from a ſmall, almoſt imperceptible vital principle, which by the Divine inſtitution is endued with ſuch a regular, orderly, and unerring power, that from moſt inconſiderable and unlikely materials builds up gradually the goodly frame of the Body, cloaths it ſelf with it, and exerciſeth an admirable Oeconomy over it: And this it doth not by ſuch a kind of choice, deliberation and forecaſt as the Watch-maker makes his Watch; for as yet this vital rational principle doth not exerciſe an actual ratiocination or diſcurſive deliberation, neither hath thoſe organs of Heart, and Brain, and Spirits, and Veſſels (by the help of which we exerciſe our Acts of Reaſon) till it hath made and framed them. And yet this admirable Frame is immediately wrought by this little particle which we call the Soul, and moulded, formed and perfected with an incomparable and unerring dexterity, skill, elegance, and curioſity more and greater than the moſt exquiſite Artiſt can ſhew in the moſt poliſhed piece of Artificial work.

Now if this little ſpark of Life that in this work of generation and formation is *Vicarius Dei*, the Inſtrument of his power and wiſdom; if this little imperceptible *Archeus* is endowed by the Divine power, wiſdom, and inſtitution with this admirable, regular, and effective power out of ſo ſmall, inconſiderable and unlikely materials to mould up and faſhion the goodly Fabrick of Humane Nature, and to perfect it for a complete habitation for it ſelf, wherein to exerciſe its moſt excellent œconomy and operations; if this *Puſillus divinæ lucis radius, ex tantilla & tam improbabili materiæ particula mirandam naturæ humanæ fabricam tam affabrè, eleganter, & inerrabundè formaverit.* If we find in ſo ſmall a particle of a created Being this admirable energy, why ſhould we make a queſtion whether that God that at firſt gave this admirable energy to the Soul to frame ſo goodly a piece out of matter ſo near to nothing, ſhould not have power to create a World of matter out of nothing.

2. Again, ſince I do ſee as plainly as I ſee my Paper that I now write upon, that this fabrication of the Humane Body is the immediate work of a Vital principle that prepareth, diſpoſeth, digeſteth, diſtributeth and formeth the firſt rudiments of the Humane nature when it is no bigger than a little Bean; that afterwards gradually augmenteth and perfecteth it to the goodly complement of a Man: And the ſame thing I ſee in the firſt rudiments of all generations as well vegetable as animal. It doth give to me (notwithſtanding all the bold confidence and conjectures of *Epicurus*, and thoſe that follow him as far as for ſhame they durſt) I ſay it doth give me not only an undeniable evidence, but an exemplar in analogy and explication, that the coalition of the goodly frame of the Univerſe was not the product of chance, or fortuitous concourſe of particles of matter, nor the ſingle effect of matter and motion; but of the moſt wiſe and powerful ordination of the moſt wiſe and glorious God, who thus

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ordered the World, and inſtituted that Rule, Order, or Law which we call Nature to be the Law of its future being and operation; if I ſee that the Coagmentation of a Man, nay of a Chicken or a grain of Wheat is not by caſualty, but the wiſe and powerful God hath committed the Coagmentation, Diſpoſition, and Formation thereof to their Seminal Principles, *tanquam Vicariis & ſubſtitutis Divini Numinis Inſtrumentis*, as it were to Vicegerents and ſubſervient Inſtruments of the Deity: I have no reaſon to think that the goodly Frame of the Univerſe was the production of Chance, or Accident, or bare Matter, or its caſual motion or modification thereof; but that the ſame was the Contrivance and Work of the Great, Wiſe, and Glorious God, as a Work in a great meaſure anſwerable to the Excellency of ſuch an Efficient.

3. Again, I find a ſort of Men that pretend to much ſeverity of Wit, and would be thought too wiſe to be impoſed upon by Credulity, where they think they have not evidence enough of Senſe or Reaſon to convince them; that would be thought to be Men above the common rate; theſe have gone about, as far as they durſt, to exclude God out of the World, and pity thoſe Men as troubled with Credulity, and of weak Parts, that believe the Regiment of Divine Providence; a buſineſs that they think, or pretend to think may be made uſe of to impoſe upon the weaker part of Mankind, think it a Fiction, and ſuch as is utterly inexplicable to the ſatisfaction of a reaſonable and impartial judgment. Now the due contemplation of the Humane Nature, and that Oeconomy that the Active Principle in it ordinarily called the Soul doth exerciſe therein to my Underſtanding, gives me both a reaſonable evidence of the Divine Providence governing the World, and a fair explication of it to me.

I mean not in this place to examine the truth or falſity of the Plurality of Subordinate Forms, or whether there be two or three diſtinct Subſtantial Forms or Souls in Man, whereby he is *Vivens, Sentiens, & Intelligens*; for they are proper for a farther Examination in their proper place: But at preſent I do ſuppoſe, that that one Soul, whereby Man is conſtituted in *Eſſe Hominis*, is the ſingle Principle of all his operations of Life, Senſe, and Intellection; becauſe, as to this purpoſe which I am now upon, it comes all to one whether there be a Unity or Plurality of Subordinate Forms, or of Souls in the Humane Nature.

I ſay therefore, in the Humane Fabrick we may obſerve two kinds of Forms, if I may ſo call them; the one, the *Forma Corporis*, as ſuch whereby it hath thoſe Properties or Operations which are common to Bodies of the like make or compoſition; whereby it is weighty and deſcends as other Bodies, it is figured, it hath dimenſions and qualities common to other Bodies; it hath in it ſome parts more active and fiery, others more paſſive and wateriſh, or earthy; it hath its tendencies to corruption and diſſipation: And though after the ſeparation of the Soul from the Body, it perchance loſeth ſome of thoſe particular Qualities, Figurations and Properties that it had before, yet it retaineth many of them; for many of theſe Proprieties of a Body as ſuch, do not depend upon the Specifical Form of the Humane Nature as ſuch: Again, there is in this Body a certain Active Specifical Form, whereby it is conſtituted in *Eſſe Hominis*, which hath in it, and doth communicate to the Body certain operations ſpecifical to it; by this he exerciſeth thoſe operations which either flow from or

are communicated by that Form, as Life, Senſe, Intellection, Volition, and the like: And though Life and Senſe be common to Man and Brutes, and their operations in many things alike, yet by this Form he lives the Life of a Man and not of a Brute, and hath the Senſe of a Man and not of a Brute: For there is no ſuch thing as *Animal*, or *Vivens*, not determined unto ſome particular *Species*, as there is no ſuch thing as a Man not determined in ſome individual: For Univerſals are but Notions and *Entia Rationis*, having their exiſtence only in the underſtanding power, and not in reality.

And theſe Operations and Faculties of Humane Life, Humane Senſe, and Humane Underſtanding and Volition flow not from the corporeal *Moles*, but from ſome other active regent Principle that reſides in the Body, and governs it whiles it lives, which we call the Soul. And therefore although the corporeal *Moles* after ſome kinds of Deaths retain the ſame bulky Integrals, the ſame Figure, Colour, and many other accidents; yet the Soul being removed, the Faculties and Operations of Life, Senſe, and Intellection ceaſe from that *Moles corporea*, and are no longer in it.

This Principle of Life, Senſe, and Intellection in Man called the Soul, hath the Body as its Province and *Diſtrictus*, wherein it exerciſeth theſe Faculties and Operations: and we ſhall find the Actions which are performed by it in the Body are of three kinds or natures; 1. Some are immanent, and not terminated immediately in any external or corporeal action. 2. Some are tranſient and ſpontaneous, terminating in the Body, or ſome parts or motions thereof. 3. Some tranſient, but involuntary, and exerciſed and terminated in or upon the Body.

Theſe ſeem to be the ſeveral kinds of Actions of the Soul, at leaſt relating to the Regiment and Oeconomical Government of the Soul upon the Body.

1. The internal and immanent Faculties and Acts of the reaſonable Soul (beſides thoſe of Common Senſe, Phantaſie, Memory, Paſſion and Appetite, common to Men and inferiour Animals) are Intellect and Will; and the proper Acts of the Intellect are Intellection, Deliberation, and Determination or Deciſion: The proper Acts of the Will are Volition, Nolition, Choice, Purpoſe or Reſolution, and Command in relation to Subordinate Faculties: And although there be many actings both of the Intellect and Will that are relative to other things or objects than what immediately concern the Microcoſm it ſelf; yet the principal part of that analogical Providence that the Soul exerciſeth in relation to the Microcoſm or Humane *Compoſitum* are Intellection, Deliberation, and Determination in the Underſtanding; and Choice, Volition, Nolition, and Purpoſe in the Will; and theſe do or ſhould regularly precede all thoſe imperate Acts of the Soul that relate to the *Compoſitum*: Before I write, or ſpeak, or go a journey, or eat, or any the like action, there is the deliberation of the Underſtanding, whether I ſhall do this action; the deciſion of the Underſtanding, that it is fit to be done; the choice of the Will to do it, the purpoſe of the Will that it ſhall be done: And although many times the diſtinction of theſe ſeveral procedures of the Soul do not always appear diſtinct, eſpecially in ſudden or ordinary actions, which ſeem to have but one act antecedent to the thing done, namely, the willing of it to be done;

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yet in actions of weight and importance all these have their distinct order and procedure. For although in the most incomprehensible and perfect Will of Almighty God there is no such succession of procedure; yet in the operations of the rational Soul that is linked to the Body, there is ordinarily that successive procedure of those immanent acts of the Soul that relate to any thing to be done. This therefore is the first part of that analogical Providence that the Soul exerciseth in relation to the Body, namely, deliberation or counsel, and decision in the Intellect; and choice and purpose in the Will.

2. The next Act, which immediately succeeds Purpose, is the Command that is given by the volitive Faculty of the Soul, and the Execution thereof: and herein are considerable, First, The Power commanding, which is the Will, now determined by purpose or resolution. Secondly, The things to which these commands relate, or the Object of them; which in relation to the Body is in effect nothing but motion of the Spirits, Nerves, Muscles, parts of the Body, or the entire *Compositum*; by virtue of this command the Muscles, the Hand, the Eye, the Tongue perform those imperate commands of the Will; I do not digest, sanguifie, nor my Heart move, nor my Blood circulate, nor my Meat digest by any immediate command of my Will; but I eat, I drink, I move my Eye, my Hand, my Muscles, my whole Body in pursuance of this command of my Will. Thirdly, The executive Instrument of this command mediately are my Nerves and Muscles, but immediately those subtil, invisible and forcible Engins which we call the Animal Spirits; these being the most subtil parts in Nature, and parts of matter subtilized, next in degree of purity to that Soul that commands them, are in their nature proper, fit, and suitable to be the first recipients of the Empire of the Soul; they are the nimblest, agil, strongest Instruments, fittest to be executive of the commands of the Soul; they are a middle nature between the Soul and the Body, the *nexus animæ* to the Body; and these subtil Messengers speedily dispatch themselves through the Nerves to the Muscles, which are by these Spirits and the native *Indoles* that is in them and the exact texture of them fitted to move those Integrals of the Body to which they serve; and as the Spirits shot through the Nerves are the first and immediate Instruments of the Soul in its imperate acts, so the Muscles are as it were the Instruments of the Spirits, or the remote Instruments of these imperate motions: And by this means the Soul hath the actual *imperium* and command of all those motions of the Body which are spontaneous or capable of being commanded by the volitive Power of the Soul; 'tis by this the Eye-lid opens or shuts, the Eye is converted to this or that object, the Lungs are intended or remitted, the Tongue speaks, the Hand strikes or moves, the Foot walks, the Mouth opens or shuts, and all those spontaneous motions subject to the Empire of the Will are performed: And though I chuse my Instance in the subject in hand, yet the like imperate motions are in Brutes and Animals, though not by the Empire of Will, which they have not, yet by a Faculty that moves in many things spontaneously in some analogy and adumbration of the Empire of the Will in Man, but incomparably below it both in perfection and freedom.

3. Again, there be very many Operations, that although they flow from

from this active Principle, yet they are not acts that are imperate by the Will, but they are in a manner natural and unvoluntary; and therefore I call them sometimes Involuntary, sometimes Natural, and they are very many and various; such are many of the acts of Sense, especially the external. Though I do by the Empire of my Will direct the Motion or *Acies* of my Organ to this or that Object, yet my Eye, my Ear, my Touch, my Smell, my Tast exercise their office of perception upon the Object duly applied to them, without any act of my Will commanding them so to do when they are joyned to their Object: So my Heart moves, my Blood circulates, my Meat digests, my Body is augmented, without any intention of mind to assist their actings. So if there be an ill humour in my Body, or a wound in my Hand or Leg, the Vital energy of my Soul thrusts out the Balsamical humour of my Blood to heal the latter, and useth all that Oeconomy that is proper for the expulsion or subduing of the former; sometimes by *pustulæ* or eruptions in the flesh, sometimes by sweat, sometimes by urine, sometimes by seige; and all this it doth in the most congruous way imaginable; so that the best Physicians have not better direction ordinarily in their applications, than to follow Nature in those motions. And all this is done most exquisitely, and yet without any deliberation or rational decision of the Understanding or Empire of the Will in relation to those Natural motions. I shall only therefore observe concerning these Involuntary motions, 1. That though they are without any *dictamen Rationis*, yet they are done in a way of as great congruity to its end, as if they were directed by the wisest counsel of the wisest Soul; and it is reason good it should, for it is a standing and most wise Law of exercise planted by the most wise God in this Vital Principle for the regiment of the Body: And therefore though it be not directed by deliberation of the Humane Intellect, or choice of Humane Will, it is setled, contrived, implanted and directed there by a higher Wisdom, even the Wisdom of the most wise God: And this indeed is the reason of that Excellency that is seen in Instincts, even of Brutes, and the Formative process in generation; that they so aptly and excellently attain their Ends: namely, because these Instincts and Powers are the immediate Impressions, Signatures and Energies placed in them by the Great and Glorious God, whose very fooliſhness, as the Apostle tells us (namely the seemingly vilest and lowest Impressions of his Wisdom) is wiser than men. 2. The second thing to be observed herein, is, That those Natural and Involuntary actings are not done as the former, by deliberation and formal command, yet they are done by the virtue, energy, and influx of the Soul, and the instrumentality of the Spirits as well as those Imperate acts before spoken of; wherein we see the immediate empire of the Soul: That Soul that moves my hand, my tongue, my foot by way of expres command and empire; digests, sanguifies, carnifies, excerns and doth all those Involuntary operations by it influence and presence: remove but the Soul, there is no more digestion, sanguification, or any other acts of that kind, than there is speech in the tongue. And although in some Insects there appears a palpitation of the Heart for some little space after it is severed from the Body; and in Chicken and other Fowl, after the separation of the Head from the Body there is a motion of the parts divided, yet it lasts not long, and they are but the irregular

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and convulsive motions or struglings of those Spirits which could not so hastily dismiss themselves from the vessels wherein they were inclosed.

I would now observe some generals in relation to this Adumbration of Providence and analogical Oeconomy of the Soul in the Body, which are these: 1. That this analogical Providence of the Soul in relation to its Province the *Compositum* or Microcosm is universal to every part of it; there is not the most inconsiderable particle of Flesh, Bone or Artery, not the smallest Capillary Vein but it is present with, and auxiliary to it, according to its use and exigence, and the congruity of its constitution; it accommodates it self to the Eye for seeing, to the Ear for hearing; and though it accommodate not it self to the Finger in those exertings of those Senses of Seeing or Hearing, yet it equally accommodates it self to those remote and small Organs as perfectly in relation to Feeling, and to those motions that are suitable to them. 2. That even those Exertions of the active Energy of the Soul that seem most remote from the deliberation of the Understanding and immediate active Empire of the Will, are guided and directed with all imaginable congruity to their several Ends and Uses. 3. That this very same individual Soul may, and oftentimes doth exert all those operations at the same time without any difficulty or confusion: At the same time I think, I deliberate, I purpose, I command: in inferiour Faculties; I walk, I see, I hear, I digest, I sanguifie, I carnifie, my Lungs move swifter or slower by the empire and command of my Will, my Heart moves naturally by the motion of Palpitation, my Blood by the motion of Circulation, Excretion, Perspiration; my Guts by the motion of Vermiculation, my Stomach and Intestines digest, the good ejects and expulses the bad, my Disease is resisted and expelled, my Wound cured, and a thousand more concurrent, coincident Motions; and all these performed at the same time by the Power, Energy and Oeconomy of one individual Soul; and yet all this done easily, and sweetly, and perfectly; without either lassitude, confusion, or perturbation.

And all this done by a little spark of Life, which in its first appearance might be inclosed in the hollow of a Cherry-stone; yet this little active Principle as the Body increaseth and dilateth, evolveth, diffuseth and expandeth if not his Substantial Existence, yet his Energy and Virtue, to the utmost confines of his little Province and every particle and atom thereof; yea and it is of that absolute necessity that it should do so, that without it the *Compositum* would be dissolved, and the Body dissipated into corruption and its first principles, as we see it falls out suddenly after the separation of the Soul from the Body: As the Body could not be reduced into that orderly frame in which it is constituted, without the Plastick and Formative power of the Soul, so it could never be upheld in that state of Order and Convenience without the continued Influence of the Soul: The latter is as absolutely necessary for its continuance and conservation, as the former for its constitution.

I easily foresee two Objections against the Method proposed; 1. That the *Hypothesis* it self is not sufficiently evidenced: How do we know that this Oeconomy is the effect of a Power, or Nature, or Being distinct from the Body? and why may it not be the result of this Disposition, Harmony, or Contemperation of qualities or parts of that Matter that constitutes

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the Body? 2. And if it be, what need we magnifie the Humane Nature as the great Inſtructer in this buſineſs; ſince we may with a little obſervation find very much the like in Brutes as well as Men? For there we find a ſenſible Perception and Phantaſie anſwering the Intellect in Man; an Eſtimative or Judicial faculty, an Appetition or Averſation and Locomotive faculty anſwering the Will; and the very Oeconomy of the animal Soul or Spirits managing as well their ſpontaneous actions as theſe natural or involuntary exertions of Digeſtion, Egeſtion, Circulation, and the reſt of thoſe Motions called Involuntary or Natural.

To the Firſt of theſe I ſay, That this is not the place for a large reduction of theſe Operations to the regiment of the Soul as a diſtinct active Faculty, diſtinct from the Corporeal *Moles* and its contemperation, that ſhall, God willing, in its due place be at large diſcuſſed, which I am not here willing to anticipate. In the mean time, let the Objector but honeſtly and impartially examine and obſerve Himſelf, and he will need no other evidence of this truth but his own experience to ſatisfie him, that all thoſe effects proceed from an active, regnant Principle within him, diſtinct from the *Moles corporea*, or the contemperation thereof. The diſtemper of the humours of the Body cauſe ſometimes ſuch ſickneſs as diſorders the Phantaſie and Reaſon; but ſometimes though it diſtempers the Body, the Intellective faculty and operations are nevertheleſs free and ſound, as Experience ſhews. If this Objector was ever under a Sickneſs or Diſtemper of the latter kind, let him give an account what it is that gives him under ſuch a Diſeaſe the uſe of his Reaſon.

To the Second I need not ſay more than what I have before obſerved; namely, 1. That although the Inferiour Natures have a kind of Image of the Humane Nature, yet it is leſs perfect, and therefore no equal Inſtance in order to the explication of what I herein deſign. 2. As it is leſs perfect, ſo it is more diſtant and leſs evident to us, than our ſelves are or may be to our ſelves; the Regiment and Oeconomy of our own Souls in our Bodies and of them are more evident to us and perceptible by us, than that Regiment and Oeconomy that the Souls of Brutes exerciſe in them, and therefore fitter to be made our Inſtance of that which I go about thereby to illuſtrate; namely, the poſſibility, neceſſity and explication of the Divine Providence in the governing and influencing of the Univerſe and all the parts thereof; which I ſhall in the next place proſecute in the Analogy that this ſmall Regnant Principle bears within its little Province to the Divine Regiment of the Univerſe.

Sic parvis componere magna.

I come therefore to the illuſtration of the Divine Providence, and Regiment of the World by the foregoing Emblem thereof.

1. By this ſmaller Inſtance of this Regiment of this leſſer World by the immediate preſidency of the Soul, it ſeems evident that it is no way impoſſible but that the greater World may be governed by the Divine Wiſdom, Power, and Providence. It is true, there are theſe two diſparities between theſe, namely, the greater World and the leſſer: The greater

greater World is of a more vaſt extent; and again, the Integrals and Parts thereof are of greater multiplicity and variety; but neither of theſe are any impediment, becauſe the Regent thereof is of an infinite immenſity more than commenſurate to the extent of the World, and ſuch as is moſt intimately preſent with all the Beings of the World, and of an infinite Underſtanding, Wiſdom, and Power that is able to apply it ſelf to every created Being, and therefore without any difficulty equally able to govern the whole and every part thereof: This we ſee in Natural agents; that little ſpark of Life, the Soul, that exerciſeth its regiment upon an Infant of a ſpan long, when the Body is grown to its due ſtature, and together with the extenſion of the Body this little Vital particle evolves and diffuſeth it ſelf to the extent of the enlarged Body, governs it with the ſame facility as it did before that extenſion. And the ſenſible Soul of a vaſt Whale exerciſeth its regiment to every part of that huge ſtructure with the ſame efficacy and facility as the Soul of a Fly or a Mite doth in that ſmall and almoſt imperceptible dimenſion to which it is conſigned. For the Soul is expanded and evolved, and preſent to every part and the uttermoſt extremity of the greater as well as the leſſer Animal. And therefore if my Soul can have its effectual energy and regiment upon my Body with eaſe and facility, with how much more eaſe and facility can a Being of immenſe Exiſtence and Omnipreſence, of infinite Wiſdom and Power govern and order a great but yet a finite Univerſe, and all the numerous yet not infinite parts thereof?

2. As there is a poſſibility of ſuch a regiment of the Divine Wiſdom, Power and Influence in the Government of the World, ſo there is a neceſſity of it. It is not enough for the Soul of the Humane Nature to form and mould its Corporeal Vehicle, if it gave over its work when that were done, it would ſoon diſſolve, diſſipate and corrupt. There is the ſame neceſſity for the Divine Influence and regiment to order and govern, conſerve and keep together the Univerſe in that conſiſtence it hath received, as it was at firſt to give it before it could receive it: The intermiſſion of that Regiment and Divine Providence and Influx but a moment after the conſtitution of this World would have diſſolved its order and conſiſtence, if not annihilated its Being.

And indeed, he that obſerves the great variety of things in the World, the many junctures and contributions of things that ſerve to keep up its conſiſtence, the want of any of which (as the diſorder of a little Nerve, Vein, or Artery in the Body) would bring it into a great diſorder; the continual ſtrife between contrary qualities, the ſtrange activity of the active Fiery Nature that involves it, or at leaſt is diſſeminated up and down in it; the vaſt and irregular concretions of Meteors, and thoſe ſtrange and various *Phænomena* that are in the World, which as they proceed from or are found in the Integrals of the Univerſe, are devoid not only of Reaſon but of Senſe. And he that after all this ſhall ſee the World upheld without any conſiderable decay or defect, in the ſame ſtate and order as it hath been for many Thouſands of years, will upon a due and impartial ſearch find that it were far more impoſſible that this could be without the Wiſdom, Power, and Influx of a moſt Infinite, Omnipreſent, Omniſcient and Omnipotent Fixed Being, than for the Humane Body to be kept without diſſolution and putre-

faction, being deſtitute of the influx and regiment of its Vital Principle the Soul.

And therefore ſome of the Ancients that were willing to ſolve the *Phænomena* of the World, have (though erroneouſly) thought that the World was Animate, and that all theſe Operations in the World proceeded from that *Anima Mundi*, as the Operations in the Bodies of Men proceeded from that *Anima Humana* that lodged in it; and at length finding ſo great effects that are and may be done by this ſuppoſed *Anima Mundi*, according to their *Hypotheſis*, have at laſt proceeded in plain terms to determine that this *Anima Mundi* was, in truth, no other than the Glorious God; whereas they might with much more eaſe and truth have attributed all the great Oeconomy of the Univerſe to the moſt Glorious God, without diſhonouring him into the exiſtence of a *Forma informans*, or a conſtituent part of that World which he made.

Others to amend that abſurdity, and yet out of a piece of mannerlineſs and reſpect, as they think, to God, though they deny this Univerſal Soul or Form informing of the whole Univerſe, yet without any ſufficient ground have deviſed ſeveral Syſtems of the Univerſe, and aſſigned ſeveral Souls to each Syſtem or *Vortex* at leaſt, which ſhould be the immediate Regent in every ſuch Syſtem, as the Soul is in the Body: This, as it ſuppoſeth ſomething without evident ground, ſo it doth without any neceſſity: For the Divine Wiſdom and Power is ſufficient for the management and government of the whole Univerſe; and if ſuch *Anima Syſtematum* ſhould be granted, yet ſtill there muſt be ſome one common Regent of all theſe Syſtems and their reſpective Souls, or otherwiſe diſorder would follow between the Syſtems themſelves.

But thus far even thoſe ſuppoſitions bear witneſs to the neceſſity of a Providential Regiment of the parts of the Univerſe; that bare Matter, Motion, and Chance cannot perform this buſineſs, but that there is a perfect neceſſity of a Regent Principle beſides it, which may govern and diſpoſe it as the Soul of Man doth his Body: And even that ſuppoſed regiment of theſe particular Souls of every Syſtem, as they muſt needs have it, if they had it at all, from the inſtitution and efficiency of the Wiſe God, ſo they are all continually influenced from him, and the whole College of them governed, guided and ordered by him as their ſovereign Regent.

3. The Third thing that I deſign is this, That although it is impoſſible for any Created Being, or the Operations thereof, to hold a perfect Analogy or adequate Repreſentation of the Divine Wiſdom, Power, and Providence in the governing of the World; becauſe the Wiſdom and the Ways of Almighty God are unſearchable and paſt finding out; they are of ſuch a perfection that no Created Being or Operation thereof can be a juſt Parallel or adequate Reſemblance of them; yet there ſeems to be ſuch an inſtance in the regiment which the Humane Soul exerciſeth in relation to the Body, that with certain correctives and exceptions may give ſome kind of Explication or Adumbration thereof, whereby though we can never get a complete *Idea* of the Divine Regiment, yet we may attain ſuch a notion thereof as may render it evidently credible, and in ſome kind explicable.

1. The firſt act of the Divine Nature relating to the World and his admini-

administration thereof is an immanent act: The most wise counsel and purpose of Almighty God terminated in those two great transeunt or emanant acts or works, the works of Creation and Providence.

The Divine Counsel relating to the work of Creation, is that whereby he purposed to make the World, and all the several Integrals thereof, according to that most excellent Idea or Exemplar which he had designed or chosen, according to his infinite Wisdom, in those several ranks and methods, and in that order and state wherein they were after created and made.

The Divine Counsel relating to his Providence, or Regiment of the World, seems to consist in these two things: 1. A purpose of communication of an unceasant influence of his power and goodness for the support and upholding of things created, according to the several essential states and conditions wherein they were made; some being created more durable, some less, some in one rank of being or existence, some in another. 2. A purpose of instituting certain laws, methods, rules, and effluxes, whereby he intended to order and rule all the things he had made with the greatest wisdom and congruity, and according to the natures and orders wherein he had created them.

And this is that which I call the law, rule, and regiment of Divine Providence, and seems to be of two kinds, namely, general Providence and special Providence.

The general Providence I call that whereby every created Being is governed and ordered, according to that essential, connatural, implanted method, rule, and law wherein it was created. And thus the state and several motions and influences of the Heavenly Bodies is that general providential law wherein they were created, and according to which they are governed; and the susceptibility of those influences, and the effects thereof, and of that motion, is the general providential law, whereby other physical Beings are governed in relation thereunto; the activity of the active Elements, and the passiveness of the passive, the methods and vicissitudes of generation and corruption, the efficacy of natural causes, and the proper effects consequential to them, the natural properties or affections of Bodies according to their several constitutions, as motion, alteration, ascent of light, descent of heavy Bodies. These and the like are the general providential Laws relating to them. Again, that things indued with sense should have a sensible perception, and certain instincts connatural to them, that rational and free Agents should move rationally and freely. These and infinite more are the standing and ordinary Rules and Laws of general Providence, and the wise God, who sees all things from the beginning to the end, and therefore can neither be disappointed nor overseen in any of his Counsels, hath with that great and admirable Wisdom so ordered these Laws of his general Providence, that he thereby governs most excellently the World; and they are never totally changed, and but rarely altered in particular, and that only to most wise ends, and upon most eminent occasions.

And the reason is, because the Infinite Wisdom of God hath so instituted and modelled those natural Laws, that they are *ad omnem eventum* fitted to the ordinary administration of the World. When the wisest Counsel of Men in the World have with the greatest care, prudence and foresight,

made Laws, yet frequent emergencies happen which they did not, nor could foreſee, and therefore they are neceſſarily put upon repeals, correctives, and ſupplements of ſuch their Laws: But Almighty God by one moſt ſimple foreſight foreſaw all Events in Nature, and could therefore fit Laws of Nature that might be proportionate to the things he made, and not ſtand in need of any change in the ordinary adminiſtration of his Providence.

The ſpecial Providence of God is ſo denominated either in relation to the objects which are ſpecial, or in relation to the acts themſelves.

Special Providence in relation to the objects, is that Providence which Almighty God exerciſeth either to Man or Angels in relation to their everlaſting ends, ſuch as are Divine Laws and Inſtitutions, the Redemption of Men by Chriſt Jeſus, the Meſſage of the Goſpel, and the like.

Special Providence in relation to the acts themſelves, are thoſe ſpecial actings of the Divine Power and Will, whereby He acts either in things natural or moral, not according to the Rules of general Providence, but above, or beſides, or againſt them: And theſe I call the Imperate Acts of Divine Providence; whereof in the next place.

2. Analogal to the imperate acts of the Soul upon the Body are the imperate acts of Divine Providence, whereby with greateſt wiſdom and irreſiſtible power He doth mediately or immediately order ſome things out of the tract of ordinary Providence. For although the Divine Wiſdom hath with great ſtability ſettled the Laws of his general Providence, ſo that ordinarily or lightly they are not altered, yet it could never ſtand with the Divine Adminiſtration of the World, that He ſhould be eternally mancipated to thoſe Laws he hath appointed for the ordinary adminiſtration of the World. Neither is this, if it be rightly conſidered, an infringing of the Law of Nature, ſince every created Being is moſt naturally ſubject to the Soveraign Will of his Creator; therefore though He is ſometimes pleaſed by extraordinary interpoſition, and *pro imperio voluntatis*, to alter the ordinary method of natural or voluntary Cauſes and Effects, to interpoſe by his own immediate Power, He violates no Law of Nature, ſince it is the moſt natural thing in the World that every thing ſhould obey the Will of him that gave it being, whatever that Will be, or however manifeſted.

Now the Inſtances that I ſhall give touching theſe *actus imperati* of Divine ſpecial Providence ſhall be, 1. In things ſimply natural: 2. In things voluntary or free Agents.

In things natural we have theſe Inſtances of the *actus imperati* of the Divine Providence, namely, firſt thoſe that are real and alſo appearing Miracles, as *Moſes* his Rod turned into a Serpent, our Saviours miraculous curing of all ſorts of Diſeaſes, and raiſing the Dead, and the like: Again, there are other things, that though they are natural effects, and not in themſelves apparently miraculous, yet are in truth the *actus imperati* of the Divine Providence, Winds and Storms, Hail and Thunder, and many the like, are things that are in themſelves natural, yet when they are in ſuch a ſeaſon and ſuch a juncture, they may be and are, and poſſibly more often than we are aware, *actus imperati ſpecialis providentiæ*: The Eaſt Wind that brought the Locuſts, and the Weſt Wind that carried them off from *Egypt*, *Exod.* 10. 13, 19. The Eaſt Wind that divided

divided the *Red Sea*, *Exod.* 14. 21. The Hail that slew the *Canaanitish* Kings, *Josh.* 10. 12. The Rain and Drought, 1 *Kings* 18. *Amos* 4. 7. Thunder and Lightning, 1 *Sam.* 13. 18. Yea the very Blasting, and Mildew, and Caterpiller, and Palmer-worm, *Amos* 4. 9. are sent by God. The ravenousness of a Lion or Bear are natural to them, yet the mission of them upon an extraordinary occasion may be an *actus imperatus* of Divine Providence, 1 *Kings* 14. 24. 2 *Kings* 2. 24. And although we often attribute as well mischiefs as deliverances to accidental natural Causes, yet many times they are *actus imperati* of the Divine special Providence, as much and as really and truly as the motion of my Pen is the *actus imperatus* of my Will at this time.

And if we enquire how these things are effected, though it may be they be sometimes effected by the immediate *Fiat* of the Divine Will, yet I have just reason to think they are most ordinarily done by the Ministration of Angels, as the destruction of the Host of the *Assyrians*, and divers other great Exertions of these imperate acts of Divine Providence. *Psal.* 103. *His Angels that excel in strength, that do his commandements, hearkning to the voice of his word.* That as the more refined and efficacious Matter, which we by way of analogy call Spirits, are the executive Instruments of the *actus imperati* of our Will, so these true and essential Spirits are ordinarily the immediate Instruments of the imperate acts of Divine Providence.

And therefore although many times Effects purely natural, that have their Originals meerly by the ordinary course of Providence, are ordered by special Providence unto great and wonderful Events, yet it seems to me very plain, that there be many natural productions that it may be in the immediate Cause, or second, or third, may be purely natural, yet at the fartherest end of the Chain there is an Agent that is not simply natural (as we use to call natural Causes) but voluntary, sometimes in the first production, sometimes in the restriction, sometimes in the direction of them, for otherwise we must of necessity make all successes in the World purely natural and necessary, and Almighty God would be mancipated to the Fatality of Causes, and to that Natural Law which he gave at first, and Prayers and Invocation upon Him in case of any calamity would be unuseful and ineffectual.

And therefore though Almighty God do not create a Wind for every emergent occasion, but the Wind is a Vapour breaking out of the Earth, yet the Ministration of an Angel may restrain, open, excite, direct or guide that Vapour to the fulfilling of those imperate acts of Divine special Regiment. And it is observable, that although the regular part of Nature is seldom varied, but ordinarily keeps its constant tract, as the Motions of the Heavenly Bodies, yet the Meteors, as the Winds, Rain, Snow, Thunder, Exhalations, and the like, which are in themselves more unstable, and less mancipated to stated and regular motions, are oftentimes employed in the World to very various ends, and in very various methods of the special Divine Providence.

And hence the Winds and Storms are stiled in a peculiar manner, *Winds and storms fulfilling his will*, *Psal.* 148. And, *He bringeth his winds out of his treasury*, *Psal.* 134. And again, *Hath the rain a Father, and who begot the drops of dew?* *Job* 38. 28. And again, *Can any of the vanities of the*

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Gentiles give rain? Jer. 14. 22. Thus the wiſe God, who doth nothing vainly or unneceſſarily, nor infringeth the more conſtant Laws of Nature, when thoſe parts thereof that are more anomalous, and more eaſily applicable to his imperate acts and ends of Providence may ſerve, more ordinarily chuſeth thoſe parts of Nature to execute his ſpecial Providences, that may do it without any great fracture of the more ſtable and fixed parts of Nature, or the infringment of the Laws thereof.

Again, as the Empire of the Divine Will doth exerciſe its imperate acts in the Methods of ſpecial Providence upon things ſimply in themſelves natural, ſo it doth upon Agents or Natures intellectual and free: Sometimes immediately by Himſelf, ſometimes by the Inſtrumentality of Angels or propoſed Objects.

This Exerciſe of the imperate Acts of the Divine Providence may be upon the Underſtanding or Will.

Upon the Underſtanding principally theſe ways, 1. By *immediate afflatus*, or impreſſion, as anciently was uſual in prophetick Inſpirations. 2. By conviction of ſome Truths, and this may be either by a ſtrong and over-bearing preſenting of them to the Underſtanding with that light and evidence, that it is under a kind of neceſſity of believing them, which was often ſeen in the primitive times of Chriſtianity, wherein God was pleaſed many times irreſiſtibly, and by immediate overpowering the Underſtanding by the powerful impreſſion of the Object or Truth propounded, to conquer as it were the Underſtanding into an aſſent. Or, 2. By advancing and enlightning the underſtanding Faculty with a ſuperadded light and perception, whereby it was enabled to diſcern the truth of things delivered: For as the Underſtanding receives ſome Truths propoſed by reaſon of the congruity between the Faculty and the Object, as the Eye ſees ſome viſible Objects by reaſon of the congruity between it and them; ſo the reaſon why it perceives not all Objects of Truth is becauſe of ſome defect of the Faculty, whereby it holds not a full and perfect congruity with them, either by reaſon of the remoteneſs or ſublimity of the Object, or ſome deficiency of light in the Faculty, which is aided by the *Collyrium* of the Divine Aſſiſtance, *Rev.* 2. Or elſe, 3. By ſome extraordinary concomitant moral evidence; ſuch was that of the Miracles of our Saviour and his Apoſtles, the Seals and Credentials of the Truths they delivered: And as thus the imperate acts of the Divine ſpecial Providence are exerciſed upon the Underſtanding, ſo they are exerciſed upon the Will, and that either immediately or mediately.

Immediately, 1. By an immediate determining of the Will: For although the Will be naturally free, yet it is naturally and eſſentially ſubject to the *imperium divinæ voluntatis*, when He is pleaſed to exerciſe that empire upon it: This although he rarely doth, yet he may do it, and ſometimes doth it irreſiſtibly, determining the Will to chuſe this or that good, and yet this without any ſuch force or violence as is ſimply contrary to the nature of it; becauſe as there is no Power in the World but owes moſt naturally an obedientiall ſubjection to the Lord of Nature, ſo even the Will it ſelf is naturally and eſſentially ſubject to the determination of the Lord and Author of it. 2. By immediate inclining and inflecting it to determin of it ſelf: This is that ſecret ſtriving of the Spirit of God with the Will, inflecting and perſwading it to this or that good: It differs from the

the former way becauſe that it is irreſiſtible, this though potent yet in its own nature reſiſtible by the Will of Man, though it many times prevails by its efficacy. *V. Gen. 6. 3. Eph. 4. 30.*

Again, 2. Sometimes it is done Mediately *more humano*, and yet not without the mediate ſpecial Empire and Regiment of the Divine Will: and thus it is done two ways, *viz.* 1. By an irreſiſtible, or at leaſt powerful conviction of the Underſtanding that the thing in propoſal is fit and neceſſary to be done or omitted; for although ſome think that the Will hath a power of chooſing or refuſing or ſuſpending, notwithſtanding the final deciſion of the practical Underſtanding, yet certain we are that ordinarily and when the Will acts as a Rational faculty, it is or ought to be determined by the laſt deciſion of the practical Underſtanding; and 2. By propoſing Moral objects that do *more humano* guide the Will to determine it ſelf accordingly; and theſe are various, ſometimes Intervention, Perſwaſion, or Examples of others, and ſometimes even the junctures of Natural occurrences. For, as I ſhall have occaſion to ſhew, and is partly touched before, even the Natural occurrences of things are under the guidance and conduct of the Divine Providence, even when to us they ſeem to be either Accidental, or to be the meer product of Natural Cauſes.

And ſurely if we ſhould deny the intervention of Imperate Acts of Divine Providence in relation to actions Natural or Moral that appear in the World, we ſhould exclude his Regiment of the World in a great meaſure, and chain up all things to a fatal neceſſity of Second Cauſes, and allow at moſt to the glorious God a bare proſpect or preſcience of things that are or ſhall be done, without any other Regency of things but meerly according to the inſtituted nature and operations of things. And thus far of the Imperate Acts of the Divine Providence. Only this farther I muſt ſubjoyn as a certain truth, That neither the Empire of the Divine Providence, or his mediate or immediate determinations, perſwaſions or inflexions of the Underſtanding or Will of Rational Creatures doth either naturally, morally, or intentionally deceive the Underſtanding, or pervert the Will, or neceſſitate or incline either to any falſhood or moral evil.

3. The third Analogy that is between the regiment of the Soul over the Body and the Divine regiment of the Univerſe, is in relation to the acts of general Providence, or that ordinary Law wherein Almighty God governs ordinarily the Univerſe and the things in it, without the particular mixture of thoſe that I have called the Imperate Acts of ſpecial Providence, which ſeems to conſiſt of two parts: 1. The inſtitution of certain common Laws or Rules for all created Beings, which (without a ſpecial intervention of his Will to alter or change) they ſhould regularly obſerve; as that the Heavenly Bodies ſhould have ſuch Motions and Influences, that the Inferiour or Elementary World ſhould have its ſeveral Mixtures and Tranſmutations by the application of the active principles and particles in it to Paſſives, and by the virtue of the Heavenly Motions and Influences: That there ſhould be viciſſitudes of generations and corruptions; that Vegetables ſhould have the operation of vital vegetation, increaſe, duration and productions according to their ſeveral kinds; that Senſible Natures ſhould enjoy a life of Senſe, and thoſe ſeveral

powers

powers or faculties of Senſation, Phantaſie, Memory, Appetition, Digeſtion, Local Motion, Generation, and thoſe ſeveral inſtincts whereby they ſhould be managed and governed according to the conveniencies of a ſenſitive nature: That the Rational Nature ſhould have thoſe Faculties of a Senſitive Nature, and ſuperadded to it the Faculties of Intellect, Reaſon and Will, whereby it might govern it ſelf as a reaſonable free Agent, and determine it ſelf to this or that action. And theſe are the inſtituted Laws of the Divine common Providence.

2. A continued influx of the Divine Goodneſs, whereby things are upheld and continued in their ſtate of being according to this Law of their Creation: And by virtue of both theſe acts of common divine Providence all things are enabled to act and operate according to the Laws of their being, without the neceſſity of any new individual concurrent act of ſpecial Providence producing, directing, or determining their ſeveral operations. And hence it is that the Will of man by the inſtituted Law of his Creation, and the common Influence of the Divine goodneſs and power is enabled to act as a reaſonable Creature, to determine it ſelf, and to govern its proper actions according to the Law of his Creation, without any particular, ſpecificating, concurrent, new imperate act of the Divine ſpecial Providence to every particular determination of his Will: Even as the continued influx of the reaſonable Soul enables thoſe Faculties which we call Natural or Involuntary, without new deliberation, purpoſe or counſel to every new act thereof: And by this means the World is in an ordinary courſe of Providence governed according to thoſe ſtanding fixed Laws given to the Univerſe and the ſeveral parts thereof by the Divine Will, wherein it is ſupported by the common influx and preſence of the Divine power and goodneſs.

And this is that which being duly conſidered extricateth that Queſtion which hath ſo much troubled the World, concerning the ſinful acts of men, and how far forth the glorious God is at all concerned in them. Certainly the imperate acts of his Bleſſed Will have nothing to do to enforce or neceſſitate the Will of man to any ſin, it is far from the purity of his Glorious Nature: But the general Law of his Providence is only thus far concerned in it, That he hath made Man an intelligent and free Agent, put him into the power of his own Will, but yet *ſub graviore imperio*, to reſtrain its actings, if he pleaſe, by his ſpecial Providence; and Man in this ſtate of his liberty, when he doth ſin, ſins from the Empire of his own Will, and not from a determination of the Divine Regiment.

But though the contemplation of the regiment of the Soul over the Body hath given ſome analogical explication of the Divine Providence in the Government of the World, yet as this Analogy is but imperfect, the Divine Regiment of the World is infinitely more wiſe, more powerful, more perfect than the regiment of the Soul over the Body, ſo in many things this Analogy by no means holds: For inſtance, The Soul doth what it doth in the Body, though by a kind of efficiency, yet it is but a ſubordinate efficient, and vicarious and inſtrumental in the hands of the Almighty; who as it hath endued the Soul with this energy, ſo the Soul is but his ſubſtitute in this regiment of the Body; but Almighty God is the ſupreme Rector of the World, and of all thoſe ſubordinate provinces

provinces and parts thereof; Secondly, in the imperate acts of the Souls regency of the Body and the *Compositum:* She cannot in the Body work immediately without the instrumentality of the intermediate animal and vital Spirits: But in the imperate acts of the special Divine Providence though we may justly think he doth most ordinarily use the ministry of those noble natures called Angels, yet he may and oftentimes doth by the immediate *Fiat* of his own Will exercise these imperate acts of special Providence; for his Power is infinite, and all Beings are in an immediate obedience and subjection to it.

3. The Soul cannot by its own Will exercise any immediate imperate act upon those natural and involuntary operations which yet are exercised by an influx from it; indeed it may starve and destroy the Body by its Empire, and thereby consequently impede and determine those natural and involuntary operations, yet it cannot by its Intention or Empire prohibit or suspend their exercise, the natural means being allowed and present; it cannot effectually prohibit the Heart not to move, or the Blood not to circulate, or the Ventricle not to digest: But it is otherwise with the Regent and regiment of the World; even those things wherein he hath set a fixed Law, which by virtue of the common influence of the Divine Power and Goodness they observe and follow, are subject to the Empire of his special Providence and the imperate acts thereof. And this is evident in that Administration of special Providence which is miraculous; he commanded the Fire not to burn, stopped the mouths and appetites of Lions, and prohibited the natural operation and agency of Natural Causes. 2. In all the special Providences that are exercised in the World, though they do not visibly appear to us to be miraculous, yet they most certainly are governed by the *imperium* of special Divine Providence, whereby it sometimes excites second Causes to production of Effects which being thus excited they naturally produce; sometimes impeding them, sometimes diverting them, sometimes directing them, sometimes by contemperation, or uniting other more active or contrary Causes allaying or enforcing them: and although it may be the interposition of the Divine *imperium* or special Providence be not immediately the immediate antecedent Cause, but it may be the third, the fourth, the tenth, the twentieth Cause distant from the Effect. Nay though possibly the conjunction of the immediate *imperium Providentiæ* be with the First Mover in Nature, the Heavenly, Æthereal, or Fiery Influx, yet the regiment of the Divine Providence is as full and infallible in relation to the imperate regiment of the Effect, as if it were immediately joyned to the designed Effect: So that the Moral of that Poetical fiction, that the uppermost Link of all the *series* of subordinate Causes is fastned to *Jupiter*'s Chair, signifies a useful truth; Almighty God doth as powerfully govern and direct when he pleaseth, and how he pleaseth, all subordinate Causes and Effects, as the Soul governs the motion of the Muscle or Limb by those strings of the Nerve which are rooted in the Brain.

4. Again, the regiment of the Soul over the Body is the regiment of the more active part over the more passive, though both making one *Compositum*; but the regiment of Almighty God over the World is not as a part of it, or as a Form or Soul informing it, but as a Rector or Governour, distinct, separate, and essentially differing from it; his regiment

of the World in this respect not so much resembling the regiment of the Soul over the Body, which together with it make one compounded Nature; as the regiment of the Master or Rector over the Ship, or the regiment of a King over his Subjects.

And thus I have gone through the Speculative consideration of the Divine Providence resulting from the contemplation of a Souls regiment of the Body, wherein I have been the longer, because the contemplation of the Divine Providence is a Subject that delights me, and I am contented to dwell upon it as much as I may, and to take up this or any the like occasion to lead me to the contemplation of it.

And thus far touching the Usefulness of the Contemplation of the Humane Nature, in relation to truths Speculative.

II. The Usefulness of it in relation to matters Practical, wherein I shall be shorter. This Contemplation hath these useful Advantages, namely, 1. *Physical*; 2. *Moral*; 3. *Theological* or *Divine*.

1. For *Physical*, by which I mean that practical part of Physical knowledge that is called Medicinal. The due consideration and knowledge of the structure, fabrick and parts of the Humane Body is necessarily conducible to that excellent Faculty for the preservation of life and health, no one thing being more conducible to the advance and perfection of that Science or Faculty than the knowledge of the Humane Body, wherein the Experience of Anatomy and dissection, and the Observations of the ancient and modern Physicians hath given a large evidence and testimony.

2. The *Moral* Practical consequences deducible from the knowledge of the Humane nature are many and useful. For instance, when I consider the admirable Frame of the Humane Nature, made by the Wisdom, and according to the Image of the Glorious God, 1. How careful should it make me that I do not injure that goodly Structure in others, by offering violence to the life of another, or to corrupt him either by evil example or evil counsels? 2. How careful should it make me in relation to my self, not to embase that excellent Frame either of my Body or Soul, or both, into the image of a Brute by sensuality, luxury, or intemperance; or into the image of a Devil, by malice, envy, or irreligion? How careful should it make me to improve and ennoble those excellent and comprehensive faculties of my Understanding and Will with such Objects as are worthy to be known and desired? The intellectual Faculty is a goodly field, capable of great improvement, and it is the worst husbandry in the world to sow it with trifles or impertinencies, or to let it lye fallow without any seed at all.

3. The *Theological* uses that arise from the knowledge of our selves are great and many. When I consider the admirable Frame of my Body, made up in that elegant, stately, and useful composure; and when I consider the usefulness, amplitude, and nobleness of my Faculties, an Understanding capable of the knowledge of all things necessary for me to know, accommodate and fitted to the perception and intellection (though not to the full comprehension) of a World full of variety and excellency; of a God full of all conceivable perfection and goodness; a Memory able to retain the notions of what I understand; a Will endued with freedom, whereby I am a subordinate Lord of all my actions, and endued with a con-

connatural propenſion and appetite unto rational good; Reaſon and Conſcience to guide and direct me in all the enquiries and actions of my life; and beſides all this, a Soul, the ſtock and root of all thoſe Faculties, endued with immortality, and capable of everlaſting bleſſedneſs: When I conſider that this Soul of mine is not only endued with faculties admirably fitted to the life of Senſe which I enjoy in this World, but find in it certain ſecret connatural rudiments of goodneſs and virtue, and a connatural deſire and endeavour after a ſtate of immortal happineſs. And when I conſider that this Frame both of Body and Soul had its primitive origination immediately from the great Creator of all things; and although my own immediate origination was from my Parents, yet that very productive virtue was implanted in the primitive Nature by Almighty God, and the derivation of the ſame ſpecifical Nature to me was by virtue of his original Inſtitution and Benediction, and by virtue thereof that excellency and perfection of Humane Nature in its eſſential which was firſt formed by the glorious God, is handed over to me, abating only thoſe decays which Sin brought into my nature: I ſay, when I deeply and intimately conſider theſe things, I cannot but be ſenſible that that Being from whom I thus derive this being, and ſuch a being, is a moſt wiſe, powerful and bountiful Being, that could thus frame the Humane Nature, and thus freely beſtow and confer this conſtitution upon me. 2. And upon this ſenſe of his Wiſdom, Power and Goodneſs, I muſt needs entertain it with all imaginable admiration of it, and with all poſſible gratitude, for ſo great and ſo free a gift. 3. And conſequently I cannot chooſe but exerciſe the choiceſt affections I have towards him, of reverence and fear of his Greatneſs and Majeſty, of dependance and reſt upon his Power and Goodneſs, of love to the excellency of his Eſſential Perfection and Communicative Goodneſs and Beneficence. 4. And conſequently of entire ſubjection unto him that upon all the rights imaginable hath the moſt juſt ſovereignty over me. 5. And conſequently of all due inquiſitiveneſs what is the Will and good pleaſure of that God that I owe ſo much gratitude, love and ſubjection to, that I may ſerve and pleaſe him. 6. A reſolved, entire, hearty obedience of that Will of his in all things; thereby to teſtifie to him my love, gratitude, and ſubjection. 7. An external manifeſtation to Men and Angels of that internal love and gratitude I owe him by continual praiſe and thankſgiving to him, invocation of him, reverence of him, and all thoſe acts of Religion, Duty and Obedience which are the natural Proceed of that internal frame of my Soul towards him. 8. A conſtant deſire of my Soul to enjoy as much of this bountiful glorious bleſſed Being, as it is poſſible for my nature to be capable of. 9. And becauſe my eſtate and condition in this life is but a ſtate of mortality, and a temporal life; an earneſt endeavour to have my everlaſting Soul fitted and qualified to be an everlaſting partaker of his preſence and goodneſs in a ſtate of nearer union to him and fruition of him, in that future life of glory and immortality. 10. And conſequently abundance of circumſpection, care and vigilance that I ſo behave my ſelf in this ſtate of probation here, that I neither loſe his favour from whom I expect this happineſs, nor render my ſelf unworthy, unfit, or uncapable to enjoy it.

And thus this deep, ſerious, and comprehenſive Conſideration of our

ſelves and the Humane Nature in its juſt latitude, doth not run out barely into Notions and Speculations, but is operative and practical; teacheth a man Virtue and Goodneſs and Religion and Piety, as well as Knowledge, and is operative to make a man ſuch as it teacheth him to be; perfects his nature, enricheth it with practical as well as ſpeculative habits, and fits and moulds and accommodates a man to a conformity to the End of his being.

And theſe be the Reaſons that have eſpecially put me upon the ſearch and enquiry into this Subject, MAN.

I am not without excellent helps and patterns in this Inquiry, nor without the due fruits and effects that it hath had upon the Minds of them that have been exerciſed in it.

Galen, though he ſpoke darkly and doubtfully of the Soul, being deſtitute of much of that light which we now have, yet upon the bare contemplation of the ſtructure of the Body and the parts thereof, in that excellent Book of his *De Uſu Partium*, reſolves the whole Oeconomy thereof into the Power, Wiſdom, Goodneſs, and Efficiency of the Glorious God; and is tranſported both with the admiration of the Divine Wiſdom appearing therein, and with indignation againſt the perverſneſs and ſtupidity of *Epicurus* and his diſciples, which would attribute this one *Phænomenon* to Chance.

And had he, or ſhould any elſe apply himſelf to the ſearch of that Intellectual Principle in Man, his Soul, he will find a greater evidence of the Divine Wiſdom, Goodneſs and Power; as will eaſily appear in a little conſideration thereof.

CAP. II.

Touching the Excellency of the Humane Nature in general.

ALthough I intend a more diſtinct Conſideration of the Humane Nature, and the Faculties of the Humane Soul, and the Parts of the Humane Body, yet it may be neceſſary before we come to the diſcuſſion of the origination of Mankind, to premiſe ſomething concerning the Nature of Mankind, and its preheminence and excellence above all other ſublunary Creatures, that we may have a little taſt touching that Being whoſe origination we inquire. This Conſideration will be of uſe to us in the enquiry touching the origination of Man; to evidence, that neither Chance nor ſurd or inanimate Nature could be the Efficient of ſuch a Being, but a moſt Wiſe, Powerful, and Excellent Author thereof.

I ſhall not at large diſcuſs thoſe Faculties and Organs which he hath in common with Vegetables and Brutes, but thoſe only that belong to him ſpecifically as Man, and thoſe alſo but briefly.

The Corporeal Beings of this lower World are divided into theſe two ranks or kinds; ſuch as are Inanimate or not living, and ſuch as are Animate or living.

Life, according to *Ariſtotle* in 1. *De Anima, cap.* 1. is deſcribed by its effects,

effects, *viz. Nutritio, & auctio, & diminutio quæ per seipsum fit*; and the lowest rank of such things as have life are Vegetables: for though Minerals have a kind of analogical nutrition and augmentation, yet it is such as ordinarily *non fit per seipsa*, but rather by accession and digestion from external Principles and coagmentation.

The Principle from whence this Life flows in all Corporeal Natures that have it, is that which they call *Anima*, or at least *vis Animastica*. The Faculties or Operations of this *Anima vegetabilis* are these; 1. *Attractio alimenti*: 2. *Fermentatio & assimilatio nutrimenti sic attracti in succum sibi congenerem*: 3. *Digestio, vel dispersio alimenti sic assimilati in diversas partes individui vegetabilis*: 4. *Augmentatio individui vegetabilis, ex unione & consolidatione succi vegetabilis diversis partibus individui*. 5. *Conformatio hujusmodi particularum unitarum specificæ naturæ ejusdem individui cujus est augmentatio; ut in trunco, ramis, cortice, fibris, foliis, fructu*, &c. 6. *Seminificatio & propagatio ex semine vel partibus seminalibus*. 1. Attraction of aliment: 2. Fermentation and assimilation of the nourishment so attracted, into a juice of the same kind with it self: 3. Digestion, or dispersion of the aliment so assimilated into the divers parts of the vegetable individual: 4. Augmentation of the vegetable individual, from the union and consolidation of the vegetable juice to the divers parts of the individual: 5. The conformation of these united particles, to the specifical nature of the same Individual, which is augmentation; as in the trunk of a Tree, the bark, fibres, leaves, and fruit: 6. Seminification and propagation from the seed or seminal parts. These seem to be the process of the Vegetable Nature, Soul, and Life.

2. The next rank of living Creatures is that which hath not only a vegetable life, and a vegetable principle of life, but hath also superadded a life of sense, and a sensitive Soul or Principle of that life of Sense, which nevertheless as one specifical Principle exerts the acts as well of the vegetable as sensitive life.

And this nature 1. Includes all those powers and faculties of the Vegetable Nature, as Attraction, Assimilation, Digestion, Augmentation, Conformation, and Propagation or Seminification.

2. It includes them in a far more curious, elegant, and perfect manner; at least in the more perfect Animals. As for instance, the first assimilation of the attracted nourishment in Vegetables converts it into a watry humor or juice; but the assimilation thereof in Animals rectifies this alimental juice into Chyle, and then into Blood: The propagation of Vegetables is without distinction of Sexes, but that of Animals usually with distinction of Sexes; and many more such advances hath the animal nature above the vegetable in those faculties or operations which for the main are common to both.

3. It superadds a greater and higher perfection to the animal nature, by communicating to it certain essential Faculties and Powers that the vegetable nature hath not: And those are these;

1. Sense. It is true, that *Campanella* in his Book *De Sensu rerum*, and some others that have written *de Perceptione substantiæ*, attribute a kind of Sense to all created Beings, and therefore much more to those that have a vegetable life: And in some Vegetables we see something that carries a kind of analogy to Sense; they contract their leaves against the cold;

they

they open them to the favourable heat; they provide teguments for themselves and their ſeeds againſt the injury of the weather, as their *cortices*, ſhells, and membranes; they ſeem to be carried with a complacency in the propagation of their kinds as well as Brutes, and therefore many of them being impeded therein, they germinate again, though later in the year: And ſome Plants ſeem to have the ſenſe of Touch, as in the Senſitive Plant and ſome others; which ſeems to be an advance of the Vegetable Nature to the very confines, or a kind of contiguity to the loweſt degree of thoſe Animals that are reckoned in the rank of Senſibles.

But this notwithſtanding we deny a real and true ſenſe to Vegetables; indeed, they have a kind of *umbra Senſus*, a ſhadow of Senſe, as we ſhall hereafter obſerve, that Senſibles have a kind of *umbra Rationis*, a ſhadow of Reaſon, but it is only a ſhadow thereof. 2. There are alſo in their natures by the wiſe God of Nature implanted even in their vegetable natures certain paſſive Strictures or Signatures of that Wiſdom which hath made and ordered all things with the higheſt reaſon, even the leaſt inconſiderable Herb; and theſe Signatures are bound to their natures by certain connatural inſtincts planted in them; but ſtill they want the active principle of Senſe in them.

Now this Senſe or Senſitive Faculty in Animals is of two kinds; the external Senſes, and the internal. The external Senſes are five, all which belong to the more perfect Animals; and that of the Soul to all Animals, *viz.* Seeing, Hearing, Taſting, Smelling, and Touching.

And it is admirable to conſider that the great Lord of Nature hath ſo diſpoſed of ſenſible Beings, that although (for ought we know) there may be many more impreſſions or motions of external Bodies that we know not by their communication unto Senſe, becauſe we have not Faculties receptive of them. Yet the Faculties of the five Senſes are adequate and proportioned to all thoſe impreſſions of Objects from without that are conducible to the uſe and well-being of Animals in a ſenſible ſtation or nature.

The internal Senſes are of two kinds, *viz.* 1. Such as concern perception of Objects: 2. Such as concern the motion to them as uſeful, or from them as noxious.

Thoſe of the firſt ſort have ſome adumbration of the Rational Nature, as Vegetables have of the Senſible, and they ſeem to be theſe; the Common Senſe, the Phantaſie, the Eſtimative Faculty, and the Memory.

The Common Senſe, or *Commune Senſorium*, which receives the ſeveral reports of the ſeveral Senſes by their ſeveral Nerves into that common receptacle or ſeat of this uſeful office, the Brain; where it diſtinguiſheth the Objects of the ſeveral Senſories.

The Phantaſie, that in a way unſearchable unto us, 1. Creates the the Images of the things delivered from the ſeveral Senſes to the *Commune Senſorium*: 2. Compounds thoſe Images into ſome things not unlike Propoſitions, though confuſedly and indiſtinctly: 3. Makes particular applications of them one to another, though ſtill darkly and confuſedly, whereby it excites the Appetite either to proſecute their attainment, or fly from them.

The Eſtimative Faculty, which is indeed no other than the laſt operation or compoſition of the Phantaſie before-mentioned, whereby it concludes

concludes that this is a ſenſible good or a ſenſible evil, that it is attainable or feaſible, or not attainable; that though it be good, yet ſometimes it is not ſafe to be attempted by reaſon of the impendence of a greater ſenſible evil. This ſeems to be the dark and confuſed ſhadow of the deciſion of the practical Intellect in Man.

The Memory, which is an impreſſion of the Image of ſome ſenſible Object made by the Phantaſie, which remains ſome time after the impreſſion, and by the return of a like Object again is ſometimes revived and reinforced: But how this Image is made, where it is imprinted, how conſerved, are things we cannot at all attain the knowledge of; they are wonderfull, though common effects of a moſt wiſe and ſtupendious Wiſdom and Power that hath thus conſtituted even the Faculties of the Animal Nature: Only it ſeems to me that theſe Images are not made in the Brain it ſelf, as the Pencil of a Painter or Engraver makes the Image in the Table or Metal, but are imprinted in a wonderfull method in the very Soul it ſelf: For it is plain that Sounds and Voices are remembred, and yet no real configurations are poſſible to be made thereof in the Brain; for what Image can there be of a Sound?

Now as to that Faculty or thoſe Faculties that concern the purſuit or flight of what is thus propounded by the Phantaſie or Eſtimative Faculty, they are generally two: The *Appetitus naturalis*, which bears ſome analogy to the Will in the Reaſonable Nature; and the acts thereof are either proſecution of the Senſible Object propounded, if preſented by the Phantaſie and Eſtimative Faculty as good; or elſe averſation from it, if preſented as evil.

This is the Faculty of Empire or Command, for in conformity to the determination of the Appetite the motion of the Body follows.

The other Faculties that concern purſuit or averſation, are the Paſſions, the *Satellites appetitus*, ſerving either in the proſecution of the good propounded, as Love, Deſire, *&c.* or in oppoſition of the evil preſented, as Anger, Revenge, *&c.*

And thus far touching the Senſes in Animals, both External and Internal.

2. The ſecond ſuperadded prelation of the ſenſible nature above the vegetable is the faculty and exerciſe of animal and local motion, whereas Vegetables have naturally no other motion but that which is determined and natural, and what is within it ſelf; as the motion of Attraction, Digeſtion, Nouriſhment, Augmentation and Increaſe. Animals have the faculty and power of animal motion; which hath theſe acceſſions, 1. It is or may be ſpontaneous; for though the object moves objectively, yet the faculty or power moves *ab intrinſeco*, and ſpontaneouſly. 2. It moves the parts ſpontaneouſly, the Leg, the Eye, the Ear or any other part, which cannot be done by Vegetables. 3. Again, it can move the whole *Compoſitum* from one *ubi* to another (at leaſt in all Animals except thoſe that are almoſt in the nature of Plants, called *Zoophyta* or *Plantanimalia*) which cannot be done by Plants, who are mancipated and fixed to the place of their ſtation or growth, unleſs removed by an extrinſecal agent.

3. The third ſuperadded advantage of Animals is their Inſtincts. It is true, Vegetables have their inſtincts radicated in their nature, as we have

have before obſerved; yea even things Inanimate have certain ſimple inſtincts, as in the motions of aſcent of light bodies, and deſcent of heavy bodies: But the inſtincts of Animals are ſenſible inſtincts of a more noble kind and nature than thoſe of Vegetables, and ſuch as ſeem to ſavour more of an active principle; as ſagacity of Brutes in taking their prey, defending themſelves, providing againſt the inclemency of the weather, care for their young, building their neſts, and infinite more, which are too long to name.

Theſe are the ſuperadded Faculties of the Animal Nature; and proportionate and accommodate to their faculties are their organizations of their Bodies. And in as much as there is great varieties in the temperaments, diſpoſitions, faculties and uſes of ſeveral Animals of ſeveral kinds, their organizations are not only fitted to the common natures, uſes and powers of ſenſible Creatures, but every ſeveral *Species* hath its ſeveral accommodation as well of his Organs as of his Faculties to the exigence, uſe and convenience of his proper ſpecifical nature.

Thus the ranks of the vegetable perfections are not only included within the rank of ſenſible Beings, but theſe have greater perfections in what is common to both, and ſuperadditions of other more noble Faculties and Organs not communicable to the former. The Vegetable Nature is indeed like a curious Engin, but it hath but ſome ſimple and ſingle motions; like a Watch that gives the hour of the day, or a *Trochea* with one Wheel: But the Animal Nature is like an Engin that hath a greater compoſition of Wheels, and more variety of motions and appearances; as one of the compound Engins of *Archimedes*, or as a Watch, that beſides the hour of the day gives the day of the month, the age of the Moon, the place of the Sun in the Zodiack, and other curious Motions wrought by multiplication of Wheels.

Now touching the Senſitive Natures, there have been two extreme opinions, both of them extremely contrary one to another, and yet both of them, as they are delivered by their Authors, untrue.

1. That Opinion that depreſſeth the natures of ſenſible Creatures below their juſt value and eſtimate, rendring them no more but barely Mechaniſms or Artificial Engins; ſuch as were *Archytas* his Dove, *Regiomontanus* his wooden Eagle, or *Walchius* his iron Spider: that they have no vital Principle of all their various Motions but the meer modifications of Matter, or at leaſt the elementary Fire mingled with their other Matter; that they have no other form or internal principle of Life, Motion, or Senſe but that which is relative and reſults from the diſpoſition, texture, organization and compoſition of their ſeveral Limbs, Members or Organs: This fancy began by *Des Cartes* in his *Fundamenta Phyſica*, and hath been followed and improved by ſome of his admirers, and particularly much favoured by *Honoratus Faber* in his Book *De Generatione Animalium*; and herein they think they have given a fair ſolution to all the *Phænomena* of the Senſitive Nature, and given a fair prelation to the Soul of Man, which they agree to be a ſubſtantial Principle of humane actions: But in both theſe they have been diſappointed; for this ſuppoſition as it gives not at all a tolerable explication of the *Phænomena* of ſenſe and animal motions, ſo if it did, it would eaſily adminiſter to a little more confidence and boldneſs, a temptation to reſolve all the Motions of the reaſonable Soul into

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the like ſuppoſition, only by advancing the Engin or *Automaton humanum* into a more curious and complicated conſtitution: For he that can once ſuppoſe that the various modifications of Matter and Motion, and the due organization of the Bodies of Brutes can produce the admirable operations of Senſe, Phantaſie, Memory, Appetite, and all thoſe inſtincts which we find in Brutes; is in a fair way of reſolving the operation of the Reaſonable Nature into the like ſuppoſition, only by ſuppoſing the organization of the latter ſomewhat more curiouſly and exactly diſpoſed and ordered as much above that of Brutes, as theirs is above that of Vegetables. It is true, the organization of the humane and animal Body, with accommodation to their ſeveral functions and offices, is certainly fitted with the moſt curious and exact Mechaniſm imaginable; as appears by the ſtructure of the Heart, the Lungs, the Brain, the Tongue, the Hand, the Nerves, the Muſcles and all other parts, and the ſeveral orders and methods of their motions and adaptations to their ſeveral offices, and the exerciſe by them of thoſe Faculties to whoſe ſervice they are conſigned: This muſt needs be acknowledged by every man that obſerves them, or that takes the pains to read the Tracts of thoſe that have written of them; and eſpecially *Galen* his divine Book *De Uſu Partium*, *Des Cartes* and *Fabritius* concerning the ſtructure of the Eye, the ſame *Fabritius* and *Steno De motu Muſculorum*, and divers others.

But that the Principle that ſets on work theſe Organs, and worketh by them, is nothing elſe but the modification of Matter, or the natural motion thereof thus or thus poſited or diſpoſed, or the bare conformation of the Organs, or the incluſion and expanſion of any natural inanimate particles of elementary Fire, is moſt apparently falſe, even to the view of any that obſerves or conſiders impartially.

It is impoſſible to reſolve Perception, Phantaſie, Memory, the ſagacities and inſtincts of Brutes, the ſpontaneouſneſs of many of their animal motions into thoſe Principles, nor are they explicable without ſuppoſing ſome active determinate power, force, or virtue connexed to, and inherent in their Spirits or more ſubtil parts, of a higher extraction than the bare natural modification or texture of Matter, or diſpoſition of Organs, or, as they are often pleaſed to ſtile them, their *plexus partium*.

Again, it is viſible to the Eye, that that power, or virtue, or principle, whatever it is, that in the generative proceſs firſt immediately formeth and organizeth the parts of the Body, is that which guides, orders and governs all the animal motions of it after: That power which firſt forms the Brain, the Heart, the Liver, the Eye, is that which afterward increaſeth, augmenteth, exerciſeth and employeth them after: And no man living can force himſelf to imagin that that Principle which forms, organizeth, diſpoſeth, and modifieth the parts, is any thing that reſults from the organization or modification of thoſe parts which are not yet moulded or framed, but muſt have its modification from that Principle which is antecedent to any manner of organization or texture of parts into an animal compoſition: No man therefore that hath not abjured his Reaſon, and ſworn allegiance to a preconceived fantaſtical *Hypotheſis*, can undertake the defence of ſuch a ſuppoſition, if he have but the patience impartially to conſider and look about him.

2. The other extreme Opinion ſeems to advance the Animal Nature

too high, at leaſt without a due allay of their general expreſſion; namely, thoſe who attribute Reaſon and a reaſoning faculty or power to Animals as well as to Men, though not altogether in the ſame degree of perfection: ſo that they will not have Reaſon to be the ſpecifical or conſtitutive difference of the Humane Nature, but common to them and Brutes: This Opinion ſeems generally to be favoured by the *Pythagoreans*, that held Tranſmigration of Souls; by *Plutarch*, in *Grillo*, and his ſecond Oration *De Eſu Carnium*; by *Sextus Empiricus*, *Contra Mathematicos*; by *Porphyry*, *Lib.* 3. *de Abſtinentia ab Eſu Animalium*; which he endeavours to prove and illuſtrate by divers reaſons and inſtances; and among the latter by *Patricius* in his fifth Book *de Animis irrationalibus*; but above all by the ingenious and learned *De Chambre* in his Book of the Knowledge of Beaſts, wherein he aſſerts not only the ſimple apprehenſion of Beaſts by phantaſms or images wrought by the Phantaſie, but the conjunction of images with affirmations and negations, which make up Propoſitions, and the conjunction of Propoſitions one to another, and illation of Concluſions upon them, which is Ratiocination or Diſcourſe: And that in farther evidence thereof there is a certain kind of Language whereby Beaſts or Birds, eſpecially of the ſame *Species*, communicate their conceptions one to another; only this diſcurſive Ratiocination of Brutes he calls *Ratio imaginativa*, and differenceth it from *Ratio intellectualis* which belongs properly to Men, principally in this, That the imaginative or brutal Ratiocination keeps ſtill in particulars, and within the verge of particular propoſitions and concluſions; but intellectual Reaſon hath to do with univerſals, and for the moſt part grounds and directs its Ratiocination by them.

Touching the thing called Reaſon, we muſt conſider that it hath a double acceptation: 1. It is taken for every conduct of any thing by fitting means to fitting ends, or the due and convenient ordering and adapting of one thing to another; and this again ſeems to be of three kinds, *viz.* Active, Paſſive, or Mixt: 1. That I call Active Reaſon which from an inward intellective principle orders and diſpoſeth; as the Watch-maker contrives, orders, and diſpoſeth the ſeveral parts of the Watch, ſo that it excites a regular and uſeful motion: 2. The Paſſive Reaſon (which is more properly Reaſonableneſs) is that order and congruity which is impreſſed upon the thing thus wrought; as in the Watch I ſee every thing moves duly and orderly, and the reaſon of the motion of the Ballance is by the motion of the next Wheel, and that by the motion of the next, and that by the motion of the Fuſee, and that by the motion of the Spring; the whole frame, order and contexture of the Watch carries a reaſonableneſs in it, the paſſive impreſſion of the Reaſon or intellectual *Idea* that was in the Artiſt: 3. The Mixt ſort of Reaſon ſeems to be when a thing concurrs actively and from an internal principle, and (in things that have life) vitally, to the production of a reaſonable effect; but yet *per modum inſtrumenti*, and in the virtue of a ſuperiour direction of a reaſonable agent: Thus when I plow my ground, my Horſe is harneſſed and chained to my Plough, and put in his track or furrow, and guided by my Whip and my Tongue, and ſo draws on my Plough, and this reaſonable work is performed actively and vitally by my Brute in the virtue of my direction. And certainly this kind of latter Reaſon

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is evident not only in the brute Beasts in their instincts and operations, but also in Vegetables, and almost in all things in Nature; for they are all indued with a certain inherent activity, which is nevertheless implanted, directed, ordered and determined by the great Creator in the Laws of their several constitutions: The process of nutrition and generation not only in Animals but even in Vegetables is done with the highest Reason, exceeding the imitation of the Humane Reason; the Birds making their Nests, ordering their Eggs and moving them in incubation, feeding and disciplining their young, is done with the most exquisite reason and congruity thereunto, beyond the artifice of the most ingenious man. And it must needs be so; for though they concur actively from an internal Principle to the production of the effect, yet they are determined therein and thereunto, and their track ordered for them and to them by the Laws of their nature instituted and imprinted on them by the unimitable Wisdom of the highest intellectual Being. This mixed or instrumental Reason, as I may call it, therefore all must agree to belong not only to Brutes, but almost to all things in Nature, and herein differs from Reason or Reasonableness which I before call simply passive, in that it immediately proceeds from the internal active Principles implanted by God in their natures.

2. But there is another kind of Reason which we call Ratiocination, or *Discursus rationalis*, which consists principally in these three things, though the two former without the latter make not up a compleat Ratiocination: 1. The simple apprehension of things themselves, which is done by images or representations thereof, made either by the Intellect, or by the representations made thereunto by the Phantasie: 2. The compounding of the images or representation of things with an affirmation or negation; this makes a Proposition: 3. The composition of several Propositions among themselves, and drawing from them Conclusions; and this is called *Syllogismus*, Ratiocination or Discourse.

But though this be the *analysis* of Ratiocination into which by a careful attention it may be resolved, we are not to think all sort of reasoning or ratiocination, even in Men themselves, is presently by way of explicit or formed Syllogisms, or artificial Moods and Figure. Some consecutions are so intimately and evidently connexed to or found in the premisses, that the conclusion is attained *quasi per saltum*, and without any thing of ratiocinative process, and as the Eye sees his object immediately and without any previous discourse; so in objects intellectual many evident truths or principles are *primo intuitu* assented unto: as in objects of Sense the action is elicited *per saltum*; as many times when a Horse is hungry and comes to a good pasture, he falls to his food immediately without forming Mr. *Chambre*'s Syllogism,

This green is grass,
This grass is good to eat,
Therefore this green is good to eat.

But the *transitus* from the Sense to the Phantasie, and from that to the Appetite, and from that to the motion of Eating is immediate, momentaneous, and *per saltum*.

In brief, as the vegetable nature, as hath been obſerved, hath a kind of ſhadow of the ſenſible nature, ſo the ſenſitive nature hath a kind of ſhadow of the truly rational nature; their Reaſon is but a low, obſcure and imperfect ſhadow thereof, as the Water-gall is of the Rain-bow; and proportionable to their imaginative Reaſon is their animal Language, which though it be a kind of natural ſign of their Imagination and Paſſions, yet it is infinitely below the perfection of humane Language: For we ſee that thoſe Birds who by reaſon of the analogy of their organs by uſe are taught ſome words or ſentences, yet they never proportion thoſe words to an explication of any diſtinct conception ſignified by them, nor can uſe or apply thoſe words they learn to the things they ſignifie, nor can they connex their words or ſentences in coherence with the matter which they ſignifie; and commonly have recourſe to their wild natural notes when they would expreſs their imaginations or paſſions, which notes are at the beſt but like natural interjections, framed by Nature, not by Art, to diſcover their paſſions or impreſſions; and their artificial language or notes are no other than impreſſions upon their ſenſitive Memory by iterated uſe, and drawn out from them upon the ſtrength of ſuch impreſſion, or by repetition of Objects that excite that Memory.

Thus much I thought good to premiſe concerning the vegetable and ſenſitive natures, which may be of ſome uſe in the conſideration of the rational or humane nature; partly to inſtance what this latter includes, namely the whole perfection of the vegetable and animal faculties, and partly to diſcover the preference that the Humane Nature hath above the Animal Life in theſe moſt perfect faculties of Intellect, intellectual Reaſon, and Will.

I ſhall not here diſtinctly and fully examine the nature of Man in the whole compaſs and extent thereof, but ſhall reſerve it to a fuller inquiry; I ſhall only inſtance in ſo much thereof in this place as may be appoſite to my purpoſe, namely, to ſhew that he is a Creature of moſt admirable conſtitution, and ſuch as deſerves our inquiry, and ſuch whoſe firſt compoſure and origination requires a higher and nobler Conſtituent than either Chance or the ordinary method of meer Natural cauſes and concurrences; and that it is ſuch a piece as in its firſt conſtitution and ordination requires an Efficient of infinite Power, Wiſdom and Goodneſs: This is the end and ſcope of my preſent Inquiry.

Now to give a brief Inventory of the Excellence of the Humane Nature, I ſhall obſerve as near as I can this order.

Firſt, I will briefly conſider thoſe Excellencies that he hath in common with the vegetable and ſenſible nature: Secondly, I ſhall conſider thoſe ſpecifical or appropriate Excellencies that he hath above the former, both vegetable and animal nature.

Under the Second general I ſhall conſider Man ſingly with relation to himſelf, and then with relation to other things without him.

In relation to himſelf I ſhall briefly conſider theſe particulars: 1. The excellency of his Soul or intellectual nature in its nature, faculties, acts and habits; 2. The peculiar excellency of his Body; 3. The peculiar excellency of the *Compoſitum*, conſiſting of both his former eſſential parts.

In relation to things without him, I ſhall conſider him with relation 1. To God, 2. To Mankind, 3. To the other integrals of the World;

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and therein 1. Of their ſerviceableneſs and accommodation to him; 2. Of his dominion and ſoveraignty over them, and the means and inſtruments thereof.

This is the brief Scheme that I intend of thoſe ſpecifical and appropriate preheminences that the Nature of Man hath above other viſible Creatures.

Firſt therefore, touching thoſe Excellencies that the humane Nature hath above the vegetable and animal Nature, I ſhall ſubjoin theſe enſuing Poſitions.

1. There is no excellent vegetable or animal Faculty in the vegetable or animal Nature, as ſuch, but it is found in the humane Nature; ſuch as are attraction, nutrition, digeſtion, conformation of parts digeſted, proportionable augmentation, generation, ſenſible perception, common ſenſe, eſtimative faculty, ſenſible appetite, locomotive faculty, and animal motion: I meddle not herein with all thoſe ſmaller ſort of Faculties, which are peculiarly appropriate to Vegetables or Animals, as ſwiftneſs, ſagacity, ſtrength, and ſpecial artifices, which belong not to them in the common nature of Vegetables or Animals, but by certain ſpecifical Inſtincts or Faculties, becauſe though it may be ſome of them are not found in the ſame kind and degree in the humane Nature, yet they are ſuch as are abundantly recompenſed by that art and ingeny which appropriately belongs to the humane Nature.

2. There are no Organs in the ſenſible Nature (which yet are more perfect than thoſe of the vegetable Nature) ſubſervient to the Faculties of Life and Senſe, which are wanting in the conſtitution of the humane Body, at leaſt in ſubſtance and equivalence.

3. Thoſe very Faculties and Organs ſubſervient unto them in the vegetable or ſenſible Nature, which are found in them, are lodged in the humane Nature in far more excellency and perfection than they are in the vegetable or animal Nature: So that if the Faculties or Organs ſubſervient to the vegetable or animal Life in Man, do differ in their ſtate or compoſure from thoſe of Brutes, it differs for the better, as obtaining a more exquiſite perfection, uſefulneſs, beauty, and contexture, than thoſe of Brutes, as may appear in the Hand of Man compared with the Foot of Beaſts or Birds; the Foot, the Leg, the Thigh of Man, with thoſe of Beaſts, and the like. It is true, the conſtitution of ſome Faculties and Organs of Senſibles, is more accommodate to their fabrick and uſe than the like Organs of Man would be to the uſe of Brutes; but ſimply comparing one with another, the Organs of the humane Body are more curious and excellent than the Organs of the bare animal Nature. And from hence it comes to paſs, that the full knowledge of the humane Faculties and Organs, ſubſervient to the animal Life in Man, comprehends in effect all the like Faculties and Organs in the animal Nature, though differing in ſome particular textures and poſitions, with a proportionable advance by the acceſs of excellence of the humane Nature.

2. As to the ſpecifical or appropriate Excellencies of the humane Nature above the moſt perfect Animals, they come next to be conſidered.

It is true, that Animals in proportion to the length of their Life attain their complement of their ſpecifical perfection ſooner in proportion than the humane Nature: The animal Soul ſooner expands and evolves it ſelf

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to its full orb and extent than the humane Soul: Therefore the Horſe that lives naturally about thirty years, comes to his full growth and perfect exerciſe of its animal Faculties in four years; but Man, that lives not ordinarily above ſeventy yeas, comes not to the ripeneſs of his Intellectual Life 'till two and twenty or three and twenty years at leaſt, nor even to his full growth 'till nineteen or twenty: So that what we ſay concerning Man, in relation to the actings of his Mind, muſt be applied to that ſtate and age wherein his Soul hath fully as it were evolved it ſelf, and its Organs fully mature and diſpoſed for the actings of his Soul: He is long ripening, but then his maturity, and the complement thereof, recompenſeth the ſlowneſs of his maturation.

Now the Excellencies appropriate to the humane Nature are, as before, obſerved of two kinds; 1. ſuch as immediately concern the humane Nature it ſelf; or 2. ſuch as are extrinſecal, but yet relating to it.

Thoſe things that are immediately reſiding in, or part of the humane Nature, come firſt to be conſidered: And they are three: 1. His Soul, or intellectual and volitive Principle. 2. His Body, or corporeal part. 3. The *Compoſitum* or *Coalitum* of both thoſe Principles, which complete the humane Nature.

The Soul comes firſt to be conſidered, and therein theſe four things: 1. Its Conſtitution or Nature. 2. Its Original. 3. Its Faculties. 4. Its congenite Habits or rational Inſtincts.

1. Touching the Conſtitution of the Intellectual Soul of Man, I ſhall not in this place enter into a large diſcourſe concerning it, but reſerve that conſideration to its proper place, only in general it is 1. An active principle; 2. It is a ſubſtantial principle; 3. It is not corporeal or material; 4. It is not corruptible or mortal.

2. Touching its Original, whether it be by traduction, or creation, or participation, I ſhall not here diſpute, but reſerve it to its proper place for a fuller diſquiſition. But whether the one way or the other it had its original, there is no inconſiſtency but that it hath thoſe eſſential qualifications above-mentioned.

3. Touching its Faculties, they are two, the Underſtanding and the Will: And here I ſhall not concern my ſelf in the Inquiry, whether the Faculties are the ſame with the Soul it ſelf, or the ſame one with the other, and only diſtinct in notion? whether the Will be any more than the complete or ultimate act of the Underſtanding determined? It is ſufficient, that the acting of the Soul as it relates to perception and deciſion, and as it relates to choice and purſuit, or averſation, are diſtinguiſhable to us, and thoſe notions ſerve to explicate what we mean in the things we diſcourſe of, as the ſuppoſed Circles in the Heavens ſerve to explicate the appearances thereof. The Underſtanding or the Intellective Faculty (the ſhadow whereof only is the Phantaſie in Brutes, but it is but a ſhadow of this of Intellect) is a Faculty that not only gradually but eſſentially differs from and exceeds the perceptive Faculty in Brutes.

Three things there are that give us the beſt notion we can have of the humane Intellect, and the diſcrimination thereof from the animal perception and imagination: 1. The Objects thereof: 2. The Acts thereof: And 3. The Habits thereof.

1. The Object of the humane Intellect is *omne intelligibile*, which is of a far

a far larger extent than the Object of ſenſible perception or imagination, which as it exceeds not the province of ſenſible Objects, ſo it is in order to the convenience of a ſenſible Life. For inſtance: When a Brute ſees a Man, it ſees his colour, figure, motion, bulk, and by the advantage of Memory or Inſtinct it comes to him, or flyes from him, as it hath received, or thinks it like to receive good or evil by him; but it perceives not ſubſtance. Theſe Objects, among many other that might be inſtanced, fall under the perception of the Intellective, which ſeem not to be within the verge of Imagination or ſenſible perception: 1. The Notion of a Spirit, or ſubſtance void of corporeity. 2. Univerſals, or conception of things as conjoined in one common nature or notion, abſtracted from the Individuals thereof. 3. Abſtracted conceptions, as entity, corporeity, *&c.* 4. Though Brutes may be able to apprehend multitude, as things more than ſingular, yet they cannot have a diſtinct notion of Number. 5. Though they may have a confuſed imagination of ſomething as paſt, or future, yet it is without diſtinction of Time, or the notion of it. 6. The truth of conſequence in or from the antecedent. 7. The actings of the Mind or Imagination it ſelf, by way of reflection or introſpection of themſelves, are diſcernible by Man diſtinctly, but at leaſt not diſtinctly by Brutes. 8. The truth and evidence of Geometrical Demonſtration. 9. The reaſon or juſt eſtimate of connexion of things to their Cauſes. 10. The moral goodneſs and congruity, or evilneſs, unfitneſs, and unſeaſonableneſs of moral or natural actions, which falls not within the verge of a brutal faculty. 11. The Notions of a Deity, and the reſult thereupon, namely, Religion, is not to be found in Brutes, but ſeems connatural to the humane Nature, as ſhall be ſhewn.

2. The Intellectual Acts, and they are many:

1. Intellectual Perception, which greatly differs from imaginative or ſenſitive perception, as far above it: For in thoſe things where the root of intellective perception is in the ſenſe and phantaſie, the perception intellective oftentimes departs from and corrects the report of the phantaſie, as in the apparent bigneſs of the Sun, the apparent crookedneſs of the Staff in a double *medium* of Air and Water; though this kind of Intellective Perception be not without the help of Ratiocination.

2. Intellective Ratiocination, which infinitely exceeds that imaginative Ratiocination which ſome have attributed to Brutes. 1. It is diſtinct, and with a diſtinct knowledge of the terms, which in Brutes is confuſed. 2. It is founded for the moſt part in Univerſals, which is not compatible to imaginative Ratiocination. 3. The thread and train of Conſequences in intellective Ratiocination is often long, and chained together by divers Links, which cannot be done in imaginative diſcourſe or ratiocination by ſome attributed to Brutes, which if the *tranſitus* from the premiſſes to the concluſion be not very ſpeedy and ſhort, that imperfect Ratiocination is loſt in Brutes.

And here I ſhall again a little reſume the former Conſideration touching the imaginary Reaſoning of Brutes, which I have before called the Image of Reaſon, and not truly Reaſon; for it is not a diſtinct reaſoning, but performed in a phyſical moment: And though we ſuppoſe Subject, and Predicate, and *Copula*, and Propoſitions, and Syllogiſtical Connexions

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in their Reaſoning, there is no ſuch matter, but the entire buſineſs is at the ſame moment preſent with them without deducing one thing from another, though we form them into notions of diſtinct acts; and this acting of the ſentient Phantaſie is performed, 1. By a preſence of ſenſe, as the Horſe is under the ſenſe of hunger, and that without any formal Syllogiſm preſſeth him to eat: the fire burns the Cats foot, and therefore it pulleth it away becauſe the immediate ſenſe of pain enforceth it. 2. By the preſence of Memory; the Dog hath been beaten for taking the meat out of the diſh, and the next time he ſees it there, though he be hungry yet he dares not venture, for his imaginative Memory makes the paſt ſtrokes as preſent to him as if he felt them. 3. By the preſence of Inſtinct, which puts him upon thoſe motions that are moſt evidently as reaſonable as any thing can be, and yet without the intervention of Ratiocination. For inſtance, Every Creature almoſt hath certain Inſtruments for its defence, and the offence of its enemies, exactly fitted for their uſe, and they have that ſingular dexterity in uſing them that the moſt diſciplined Fencer cannot equal: The Cock, for inſtance, hath his Spurs, and he ſtrikes his Feet inward with ſingular ſtrength and order, and it is not poſſible he ſhould uſe his Spurs with greater reaſon for his advantage; yet he doth not this by any ſyllogiſtical method, or by Ratiocination, but is meerly tutored to it by Inſtinct, which is preſent with him, and at hand without any diſcurſive Reaſoning. And this appears, becauſe while it is yet a Chick, and hath no Spurs, nor cannot hurt by it, nor yet hath ſeen the like motion before to imitate or learn it; yet he readily practiſeth it. And to theſe three preſent impulſes of Senſe, Memory, and Inſtinct, moſt if not all the ſagacities of Brutes may be reduced without the help of true Ratiocination or diſcurſive Reaſon; though witty men by Analytical reſolution have Chymically extracted an artificial Logick out of all their actions.

3. Intellective Memory, which I call an act of the intellective faculty becauſe it is wrought by it, though I do not inquire how or where, becauſe it is not ſolvible: The ſpecifical preferences that it hath above the ſenſible Memory are theſe; 1. That it remembers and retains ſuch things as were never at all in the Senſe, as the conceptions, enuntiations and actions of the Intellect and Will; the conviction of truth or falſhood of propoſitions or reaſonings; the conceptions of univerſals: whereas the ſenſitive Memory retains nothing but ſenſible Objects, or their Images wrought by the Phantaſie. 2. In that it is more complicated and complex than the ſenſitive Memory, retaining the *ſeries* of propoſitions, argumentations, and a long tract of hiſtorical narratives. 3. In that it is more diſtinct and unconfuſed than the ſenſitive Memory. 4. In that it is firmer, and more fixed and permanent than the ſenſitive Memory. 5. In that it can reſuſcitate and ſtir up it ſelf to remember and call together other Images or *media* to retrive what it once remembred; which is Reminiſcence, an act of intention, which therefore *Ariſtotle* in his Book *De Memoria & Reminiſcentia* makes an act peculiar to Man; whereas the Memory of Brutes is either conſerved by the Images impreſſed by the Imagination, and there continued, or revived and reinforced by the occurrence of external Objects bearing an identity or reſemblance to the Images at firſt impreſſed by the Phantaſie.

4. Deli-

4. Deliberation; a ſtaid and attentive conſideration of things to be known and their *media*, and of their ſeveral weights, concluſiveneſs, or evidence; and of things to be done and their *media*, their congruity, ſuitableneſs, poſſibility and convenience, and of the ſeveral circumſtances aptly conducible thereunto; which is an act far above the animal actings, which are ſudden and tranſient, and admit not of that attention, *mora*, and propendency of actions.

5. Judgment; either concerning things to be known, of the weight and concludency of them and ends in deciſion; or of things done or to be done, of their congruity, fitneſs, rightneſs, appoſitneſs: and this if it refers to things to be done, ends in determination or purpoſe; if in relation to things already done, then in ſentence of approbation or diſapprobation: And hither that which we call Conſcience is to be referred, namely, if by a due compariſon of things done with the rule, there be a conſonancy follows the ſentence of Approbation; if diſcordant from it, the ſentence of Condemnation.

And this act of the Judgment in relation to things to be done, and the determination thereupon, is that which is uſually ſtiled the laſt deciſion of the practical Underſtanding immediately antecedent to the decree of the Will, which it muſt follow by a kind of moral neceſſity, when it acts as a reaſonable Faculty, and in the due ſtate and order of its nature; though by its liberty and empire it ſometimes ſuſpends its concurrence. And thus far concerning the Acts of the Underſtanding.

3. Concerning intellectual Habits or the genuine effects of theſe acts in the underſtanding Faculty, and they are divers and diverſly expreſſed by thoſe that have treated thereof.

1. Opinion, when the aſſent of the Underſtanding is ſo far gained by evidence of probability, that it rather inclines to one perſwaſion than to another, yet not altogether without a mixture of incertainty or doubting.

2. Science or Knowledge effected by ſuch evidence, *cui non poteſt ſubeſſe falſum*; as in caſe of demonſtrative evidence.

3. *Fides*, or Faith, or Belief, which reſts upon the relation of another that we have no reaſonable cauſe to ſuſpect; and upon this account we believe Divine Revelation when we are ſufficiently convinced that it is Divine Revelation; we alſo believe our Senſes, becauſe we have the greateſt Moral evidence that we can reaſonably have of the truth of their reports, when they are not controlled by apparent Reaſon, impoſſibility, or improbability: We believe good and credible perſons, and this principally referrs to matter of fact, which we cannot or do not controll by our Senſes or other weighty evidence; as that there was ſuch a man as *Julius Cæſar*, that there is ſuch a place as *Rome*, though we never ſaw the one or the other; becauſe delivered over to us by credible perſons, and ſuch who could probably have no end to deceive us.

4. Wiſdom; which is a complicated habit referring to all things to be known and done, the due compariſon of things and actions, and the preference of them according to their various natures and degrees.

5. Prudence; which is principally in reference to actions to be done, the due means, order, ſeaſon, method of doing or not doing.

6. Moral Virtues; as Juſtice, Temperance, Sobriety, Fortitude,

Patience, &c. for these begin in the Intellect, though their exercise belong principally to the faculty of the Will.

7. Arts Liberal or Mechanical; for though the exercise of those (in which the formal nature of an Art consists) be external, yet the Ideal notion and habit of them begins in the Understanding; and a man is first a Geometrician in his Brain, before he be such in his Hand.

And all these habits of the intellectual Faculty are far advanced above what is found in Sensible Natures; take the last for instance. It is true, we find a rare dexterity in the Spider and Silkworm in framing of their threads, but this proceeds not from any Intellectual principle in them, but from an Instinct connatural to them, and whereunto they are determined by the Law of their nature; again, we find in the Fox, the Hawk, and other Animals admirable sagacities, wiles and subtilties in getting their prey and in defending themselves: But when we consider the sagacity of the Humane Understanding, although the particular Instincts of some Animals are scarce imitable by it, yet it exceeds them in other things almost of the same nature, and so by way of equivalence, or rather prelation in those very Instincts; witness the Arts of Painting, Tapestry, Fortification, Architecture, the Engins whereby noxious and subtil Animals are subdued, and infinite more arising from the fruitfulness of the Understanding and the dexterity of the Hand. And thus much touching the Intellective Faculty, the seat of intellective Perception and Counsel: I come to consider of that other Faculty, the Will, the seat of Empire and Authority.

The Will therefore is that other great Faculty of the Reasonable Soul; and it is not a bare appetitive power as that of the sensual appetite, but is a rational appetite, and is considerable, 1. In its Nature, 2. In its Object, 3. In its Acts.

1. The Nature of this Faculty is that it is free, *domina suarum actionum*, free from compulsion, and so spontaneous, and free from determination by the particular Object, wherein it differs from the sensitive appetite, which though spontaneous, because moving from an inward principle, yet is, if not altogether, yet for the most part determined in its choice by the external Object. But how far forth the Will is determined by the last act of the practick Understanding, or how far such a determination is, or is not consistent with the essential or natural liberty of the Will, is not seasonable here to dispute. This liberty of Will, together with that other Faculty of Understanding, is that which renders the humane Nature properly capable of a Law, and of the consequence of Law, Rewards and Punishments; which doth not properly belong to the animal Nature, because destitute of these two Faculties.

2. The Object of the Will is not confined to a sensible Good, but is much larger, namely, such a Good as is compatible to an Intellectual Nature in its full latitude, such as are moral and supernatural Good.

3. The Acts of this Faculty are generally divided into Volition, Nolition, and Suspension: That division that herein better suits with my purpose are these, Election and Empire.

1. Election or choice, and this in reference both to means and end; for though the Schools tell us, that *Electio* is only *mediorum & non finis*, this is to be intended of the general end or good at large, and in its universal

verſal conception, for when ſeveral particular ends are in propoſal, there is belonging to the Will a power of Election of theſe, as well as of the means to attain them.

2. The *Imperium voluntatis* over the Body and the Faculties: We may obſerve in the humane as well as the animal Body two kinds of motions or exertions of Faculties; ſome are ſtiled natural or involuntary, ſuch is the motion of the Heart, the Circulation of the Blood, the perception of the Senſes; when the Organs are open, and the Object applied, theſe natural, though vital Faculties and Motions, are not under the command of the Will immediately, for whether I will or will not, while I live, my Heart beats, my Blood circulates, my Ventricle digeſts what is in it, my Eye ſees when open. But there be other Motions in the humane, and alſo in the animal Nature, that are ſubject to the command of the Will in Man, and to the appetite in Brutes, as local motion, which in Animals is under the regiment of the Appetite, in Man under the regiment of the Will.

Now this *Imperium voluntatis* may be conſidered in relation,

1. To it ſelf: It can ſuſpend its own acting, either of electing or rejecting.

2. To the Underſtanding: Though it cannot ſuſpend its perception, *omnibus ad percipiendum requiſitis adhibitis*, yet it may ſuſpend its deciſion or determination, or at leaſt its *obſequium* to ſuch deciſion.

3. The Paſſions, which are as it were the *Satellites voluntatis*, and follow the command of the Will, where the Will acts according to its power and authority.

4. To the animal Spirits, and the Veſſels in which they are received when deſigned to Motion, namely the Nerves and Muſcles, theſe are all ſubject to the Empire of the Will, as to Local Motion of the whole Body or any part thereof, when the Spirits, Nerves and Muſcles are in their due and natural ſtate.

5. To the ſenſual Appetite: And indeed herein is evident both the Empire and Sovereignty of the Will, and alſo the viſible diſcrimination between the Humane Nature and the Animal or Brutal Nature, and its preference before it. In the animal Nature it is evident that the ſenſual Appetite is that which hath and exerciſeth the ſovereignty and dominion over the ſpontaneous actions of the animal Nature, that commands the Foot to go, the Mouth to eat, and all other the ſpontaneous motions in order to a ſenſible good: But in Man the ſenſual Appetite is *Regimen ſub graviore regimine*, the government of the Appetite is under the government of the Will and controlled by it, at leaſt where the reaſonable Faculty is not embaſed and captived by ill cuſtom or diſorder. And this appears two ways:

1. Sometimes the very motion of the Appetite it ſelf is reſtrained by the Empire of the Will, ſo that a man doth not *appetere* that ſenſible good which otherwiſe he might or would, becauſe he will not; and this is the moſt natural and noble regiment of the Will over the ſenſual Appetite.

2. Though it may fall out that the ſenſual Appetite may *appetere bonum ſenſibile*, yet the Will may and doth controll the empire of the Appetite in the execution of that appetition: As for inſtance, A man ſees delicious

fruit, and he desires it; in so much, that were there not a controll over the empire of his Appetite, it would command the Hand to reach it, and the Mouth to eat it: But the contrary command of the Will supersedes the command of the Appetite; the Appetite desires it, but the Hand is forbidden by the Will to reach it.

Now if any man shall say this contradiction appears, not only in the reasonable Nature, but even in the sensible: The sensible Appetite is checked in its execution oftentimes by sensual Fear, as in Dogs and Horses, and other Brutes, yea sometimes by the remembrance of a former suffering for the like attempt to gratifie his sensual Appetite; and yet they are destitute of any superior faculty of Will to interpose a prohibition upon the Appetite. I answer, this is true, for in such cases the impendent Fear is either present or in memory, and so expected; and it being of a sensible evil, hath the same influence upon the sensual Appetite as the present good; and therefore if the evil feared or impendent be a greater sensible evil than the good, it over-rules the Appetite to aversation; as the Fish that loves the bait, yet feareth the hook, which it discerns as a greater sensible evil, the very Appetite is thereby determined to aversation.

But the controll of the Will upon the Appetite in the reasonable Nature, is many times, and indeed most often done, not upon the account of a sensible evil felt or feared, which of it self were sufficient to determin the Appetite; but sometimes upon the account of such hopes or fears as fall not under a sensitive notice, as of the command or prohibition by God; yea many times upon a bare Moral account of the *indecorum*, unreasonableness, unseasonableness or utter unfitness of the thing it self, without any other motive of fear either of a present or future sensible inconvenience thereby; which Moral consideration can no way move the sensible Appetite, were it not for the Will, which being a rational Faculty is moved by it.

And this is all that I shall say touching the two great Faculties of the Soul, the Understanding and Will: I shall not add any thing here touching Passions or Affections of the Mind, 1. Because they are but a kind of appendices to the Will, the *Satellites voluntatis*; those of the concupiscible kind being as it were the flowers of the motion of Volition, those of the irascible kind the flowers of the motion of Aversation. 2. Because the Passions for the most part are found in the sensible Nature, namely those of love, hatred, delight, grief, expectation and fear; and therefore I shall not here treat of them.

3. I come now to consider of those rational Instincts as I call them, the connate Principles engraven in the humane Soul; which though they are Truths acquirable and deducible by rational consequence and argumentation, yet they seem to be inscribed in the very *crasis* and texture of the Soul antecedent to any acquisition by industry or the exercise of the discursive Faculty in Man, and therefore they may be well called anticipations, prenotions, or sentiments characterized and engraven in the Soul, born with it, and growing up with it till they receive a check by ill customs or educations, or an improvement and advancement by the due exercise of the Faculties. I shall shew first what they are: Secondly, what moves me to think that such are connatural.

1. Touching

1. Touching the former, I think those implanted and connatural anticipations are these; namely, That there is a God; that he is of greatest Power, Wisdom, Goodness, and Perfection; that he is pleased with good, and displeased with evil; that he is placable; that he is to be feared, honoured, loved, worshipped, and obeyed; that he will reward the good, and punish the evil; a secret sentiment of the immortality of the Soul, or that it survives the Body to be capable of rewards and punishments, according to its deportment in this life; certain common notions of Moral good and evil, of *decorum* and *turpe*; that faith and promises are to be kept; that a man must do as he would be done by; that the obscene parts and actions, though otherwise natural, are not to be exposed to publick view, *obvelatio pudendorum*; that a man must be grateful for benefit received: These, and some such common notions or intimate propensions seem to be connaturally engraven in the Soul antecedently to any discursive Ratiocination; and though they are not so distinct and explicite, yet they are secret Byasses inclining the humane Nature primarily to what is useful and convenient for it in proportion to the state of an intellectual Nature: That as we see in Brutes, besides the exercise of their Faculties of sensitive Perception and Imagination, there are lodged in them certain sensible Instincts antecedent to their imaginative Faculty, whereby they are pre-determined to the good and convenience of the sensible Life: So there are lodged in the very *crasis* and constitution of the Soul certain rational Instincts whereby it is pre-disposed, inclined, and byassed to the good and convenience proportionable to a rational and intellectual Life; a certain congenite stock of rational Sentiments and Inclinations which may go along with him, and fairly incline him to such a trade and way as is suitable to the good of his Nature; so that he is not left barely to the undetermination, incertainty, and unsteadiness of the operation of his Faculties, without a certain secret and gentle predisposition of them to what is right, decent, and convenient for their manage and guidance by these common anticipations, inclinations, and connatural Characters engraven in the Soul. 2. And that which inclines me to believe this, is not only the congruity of the supposition to the convenience of the humane Nature, and the instance of the sensible Instincts in the animal Nature proportionate to their convenience, and the great importance of them to the convenience thereof: But also that which is observable in the attentive consideration of the manners of Mankind in general, which seems to have those common sentiments in them, and to accord in them in a very great measure; and though evil Customs and Education much prevails among men, yet it doth not wholly obliterate these sentiments, at least from the generality of Mankind.

It must be agreed that these rational Instincts, as I call them, are not always so vigorous and uniform in their actings as the animal Instincts of Brutes are in their kind, which partly proceeds from that liberty of Will that is in the humane Nature which many times suspends or interrupts their energy and operation, partly from that mixture of the sentient Appetite with the actings of the reasonable Soul, which oftentimes transport it: Even the more simple and uncompounded any Nature is, the more uniform are its motions and actings; the natural Instincts and Proportions even of things inanimate (as of heavy Bodies to descend) are more

more uniform than the very Inſtincts of Brutes, who have a more complicated form or nature: But as this accidental interruption of rational Inſtincts doth not diſprove their exiſtences, ſo Man hath a greater advantage by the exerciſe of his Reaſon and intellective Faculties, to remove thoſe interruptions, and improve thoſe connatural Sentiments or rational Inſtincts to his ſingular uſe and benefit, which abundantly recompenceth thoſe Interruptions.

And if any ſhall ſay that there are or may be other means of propagation of thoſe motions and inclinations in Men, namely, 1. A Traditional traduction of them into the World; and 2. The Exerciſe of the humane Intellectual Faculties upon the occurrence and obſervation of external Objects and Events: I anſwer,

1. As touching Traditional communication and traduction of thoſe Truths that I call connatural and engraven, I do not doubt but many of thoſe Truths have had the help of that derivation: But, firſt, ſuch a Tradition poſſibly hath not been without interruptions by evil Education, and yet theſe Sentiments have obtained almoſt in all Ages and Places, though not without interſperſion of certain corrupt additaments, obtained likewiſe by evil Cuſtom or Education. But ſecondly, it cannot reaſonably by ſuppoſed that a Tradition could ſo conſtantly and univerſally prevail and obtain among Mankind, unleſs there were ſome common conſonancy and congruity of ſomewhat inherent in Nature which ſuits, correſponds and ſuffragates to that Tradition, and cloſeth with it, and accepts it.

2. As to the other, concerning the Exerciſe and Actings of our Intellectual Faculties, it muſt needs be agreed that thoſe that I call Connatural Principles are in themſelves highly reaſonable, and deducible by a ſtrong proceſs of Ratiocination to be moſt true and moſt convenient; and conſequently the high exerciſe of Ratiocination or intellective Diſcourſe might evince their truth and excellency, though there were no ſuch originally inſcribed in the Mind: But this no more concludes againſt the ſuppoſition, than it would conclude againſt the ſuppoſition of implanted Inſtincts in Brutes; which as they are in themſelves highly reaſonable and uſeful to their ends, and evincible by true Reaſon to be ſuch, as it may be any thing we know: So alſo many, though not all the actings of thoſe Inſtincts might poſſibly in the Brutes themſelves be elicited by a ſtrong intention and exerciſe of their Phantaſie and ſenſible Perception, Ratiocination, and Connatural Implantation, are but ſeveral means or diſcoveries of the ſame thing which in it ſelf is moſt highly reaſonable; only the latter is for the moſt part leſs difficult, and readier at hand. But to the Objection.

1. Let any man but duly conſider how few men there are in the World that are capable in reſpect of the meanneſs of their Parts and Education, to act and improve their Intellects or Faculties to ſo high a ſtrain as the eliciting of thoſe that I call Connatural Principles by the ſtrength of their Intellectual Operation; this requires very choice Parts, great attention of Mind, ſequeſtration from the importunity of Secular employments, and a long advertent and deliberate connexing of Conſequents; which falls not in the common road of ordinary men, but of Philoſophers, Metaphyſical heads, and ſuch as have had a more refined education,

which

which is not the thousandth part of Mankind: Other men require a more easie and familiar access to these Truths and Inclinations; and yet we see that these Sentiments are not confined to the *Literati* of mankind.

2. Again, I appeal to the most knowing men in the World that have but had the leisure to think seriously and converse with themselves, and that have kept their Minds free from the fumes of intemperance and excess, passion and perturbation; whether next under Divine Revelation their best and cleerest sentiments of Morality at least have not been gathered from the due animadversion and inspection of their own Minds, and the improving of that stock of Morals that they there find, and the transcribing of that Original which they found first written there: It is true, that it is with the connatural Principles inscribed in our Minds as it is with our Faculties, they lye more torpid, and inactive, and inevident, unless they are awakened and exercised, like a spark involved in ashes; and being either suppressed or neglected they seem little better than dead, but being diligently attended, inspected and exercised, they expand and evolve themselves into more distinction and evidence of themselves. And therefore it was not without some kind of probability that some of the Ancients thought that Science was little else than Memory or Reminiscence, a discovery of what was in the Soul before. But whatever may be said of other matters, certainly the first draughts and strictures of Natural Religion and Morality are naturally in the Mind.

And hence some thinking men have thought that the specifical difference of the humane Nature is Propension to Religion, and therefore define Man to be *Animal religiosum*, which could not be from any habit barely acquisite by the exercise of Faculties, unless the same were radically engraven in the very texture of his Soul.

I shall add but this one thing more: It is plain that the existence of a Deity as a Being of infinite Perfection, and consequently of infinite Goodness and Justice to reward and punish, and of infinite Power and Wisdom, is a truth that is highly rational and demonstrable by the exercise of intellectual Faculties upon the consideration of the Universe and its several parts; and possibly the Immortality of the Soul is evincible by very great reason: But these great truths are not communicated barely by one kind of means, and it is needful, in respect of their use, they should all have all contributions, and not only Brains to pursue a long train of consequences. And yet we shall find in the generality of mankind (especially when death begins to draw towards them) a very quick and active demonstration of these convictions, and possibly many times more vigorous and active than that rational conviction that is wrought by Speculation and Syllogisms, which evidenceth that these Principles of the existence of a most righteous and powerful God, and a state of rewards and punishments after death, are more universally engraven in the *Crasis* of the Soul by Almighty God in its natural constitution than barely by the exercise of Faculties in Speculation and Ratiocination.

And herein it must be remembred that I am in this Discourse still in the outward Court of the Gentiles, discoursing only as a reasonable Man, and not taking in the assistance of the Christian Doctrine and those *subsidia divinæ gratiæ* that relate thereunto.

There-

Therefore to conclude this point, There ſeems to be two means of communicating and preſerving in the Soul and Conſcience theſe great ſpeculative and moral Principles whereof I have even now treated, *viz.* 1. That which I here call Connatural, or a certain rational Inſtinct engraven in the very Make and conſtitution of it: And as thoſe that write of Conſcience tell; us it hath three offices or acts, *Syntereſis*, *Syneideſis*, and *Epicriſis*; ſo thoſe Principles are lodged in that Cheſt of the Conſcience called *Syntereſis*.

2. A ſecond means of attaining and keeping and improving theſe connatural Sentiments or rational Inſtincts both ſpeculative and moral, is that admirable adaptation of the Faculties of the humane Soul to thoſe Principles and Sentiments, that as the Eye diſcerns light and colour by a congruity between the viſive Faculty and the viſible Object, and as the Palate taſts and reliſheth its meat by the congruity between the Faculty and the Object, whereby it judgeth of what is good and embraceth it, and what is evil to it, and rejects it: So in the humane Faculties, thoſe of his Intellect and Will there is a proportionating of the Faculties to the Object, whereby the former diſcerns truth from falſhood, and moral good from moral evil, *honeſtum & decorum* from *indecens & turpe*; and accordingly the Will, when it acts regularly and as it ſhould, accepts or rejects it: But as the eſtimative Faculty in Brutes is nevertheleſs conſiſtent with their connatural Inſtincts, which latter have ſtill excellent uſe in the ſentient Province; ſo this adaptation of the Faculties in Man to their Objects doth not exclude thoſe connatural, implanted, rational Inſtincts in the humane Nature, but both conſiſt together, and are of admirable uſe to the humane Soul.

And thus far concerning the Soul of Man, its Faculties and Inſtincts.

I come now to conſider of the ſtructure and fabrick of the humane Body, and that not at large, for that will be for another place, but briefly and ſummarily to give an acccount of ſome of thoſe appropriate and diſcriminating notices wherein it differs from and hath preference above the moſt perfect brutal Nature: And they are ſuch as either concern the entire Fabrick of the Body, or ſuch as concern ſome ſpecial Parts or Integrals thereof: but I ſhall mingle them together as followeth.

1. There is in the humane Fabrick a greater Majeſty and Beauty than in any Animal in the World beſides; and that appears, 1. In the erectneſs of his poſture; all other Animals have tranſverſe Bodies, as Birds and Beaſts, and though ſome do raiſe themſelves upon their hinder legs to an upright poſture, yet they cannot endure it long, it is unnatural and uneaſie to them, neither are the figures or junctures or order of their Bones, Nerves, and Muſcles fitted to ſuch a poſture. And it is obſervable, that the ſtructure of Man's Body is with that equilibration (notwithſtanding divers prominences therein) the compoſure of his Nerves and Muſcles for the due motion of his Spirits, the ſtructure of his Feet are ſo ſingularly accommodated; that he maintains this erect poſture ſtanding or walking, though his Feet, the *Baſis* of the Pillar of his Body, be much narrower than the latitude of hisBody. 2. In the Majeſty of his Face and Eyes. 3. In the Beauty of his Face: Beauty conſiſts principally in theſe things, Figure, Symmetry, and Colour. No Bird, or terreſtrial Animal

Animal exhibits its Face in the native colour of its Skin but Man; all others are covered with Feathers, or Hair, or a *Cortex* that is obduced over the *Cutis*, as in Elephants and some sort of *Indian* Dogs; and though in the torrid Climates the common colour is black or swarthy, yet the natural colour of the temperate Climates is more transparent and beautiful.

2. There is no Animal hath any Organ of equal use to the Arm and Hand of a Man, that *Organum organorum*, an Organ accommodate to all the useful motions, operations, arts and uses of his life: Man is born without any offensive or defensive weapons like to those of other Animals, but by the usefulness and accommodation of this Organ and his Intellective faculty he maketh weapons and useth them, he forgeth and mouldeth Metals, builds Houses and Ships, makes his Cloaths and Ornaments, and exerciseth all Arts for use and ornament.

3. There is no Creature that I know of, hath the like structure of his Leg and Foot; the former being only two to support his Body, have greater and larger Muscles than any Animal of no greater proportionable bigness; and the latter being the *Basis* of those Pillars, are admirably fitted by their length and figure for his *gressus progressivus*.

4. Since the Brain is the great Organ of Intellection in Man, and of Imagination in Brutes, which are the two noblest Faculties of either Nature, it will not be amiss to examine the differences between the Brain of either, and the Nerves proceeding from either, wherein none that I know hath given more light than Doctor *Willis* in his Anatomy of the Head; all therefore that I shall do herein shall be to gather up the most of those observable differences that lye dispersed in that Book.

1. The humane Brain is in proportion to the Body much greater and larger than the Brains of Brutes, having regard to the size and proportion of their Bodies, and fuller of *anfractus* or sinuations, and so more capable of greater diversity of employments and uses in the Perceptive Faculties.

2. There are in the Brain certain portions called *protuberantia annularis, nates, & testes*; and that in those Brutes wherein this *protuberantia annularis* is largest in proportion, those Brutes are of greatest sagacity and subtilty, as Foxes, Apes, *&c.* that though in Man those prominences called *nates* and *testes* are the least, yet the *protuberantia annularis* is greater in proportion in Man than in any Animal, the structure of this Organ being fitted to a greater degree of natural sagacity.

3. That whereas in Brutes the only communication of the Brain with the Heart is by the *nervus paris vagi* derived fromthe *Cerebellum*, and spreading its branches into the Muscle of the Heart; in Man there is not only the same communication of that Nerve, but a ramification of the *nervus intercostalis* is also inserted into the Muscle of the Heart, whereby a greater communication between the Brain and Heart is maintained in Man than in Brutes.

4. That other ramifications of this *nervus intercostalis* are derived into the Chest and *Diaphragma*, whereby principally that peculiar affection of Laughter is excited, more appropriate to Man, together also those others of Sternutation and other natural actions common to Men and Beasts are excited, but not from the like communication of that Nerve in Brutes.

And thus much ſhall ſerve to be ſpoken of the peculiarities of the Humane Body, though what I before ſaid touching the Faculties of the Animal Nature in Man muſt alſo be remembred touching the organical parts of his Body: There is no Organ in the Brutal Body ſubſervient to the Animal Faculties, which is not found in the Humane Body, with ſuch variations and additions as render them more curious, perfect, uſeful, and admirably accommodate to his Animal Life and Faculties: But of this more fully hereafter.

3. I ſhall now ſubjoin a Conſideration of Man in his whole *Compoſitum*, conſiſting of both his eſſential parts of Body and Soul, and of the aggregation of the Faculties and Organs belonging to either, ſo far forth as they evidence his appropriate and ſpecifical Excellency above the Animal Nature.

The appropriate or ſpecifical acts of the humane *compoſitum*, are the capacity and faculty of inttituted Signs, expreſſive of the inward conceptions of the Mind, which are of two kinds: 1. Audible, 2. Viſible Signs.

The Audible Signs are inſtituted Speech or Language, the formal nature whereof conſiſts in two things: 1. Articulate Voice; 2. The accommodation of the Articulate Voice to the rendring or expreſſing of the inward thoughts or intentions of the Mind: And herein is the great preference of the language of Man above that of Brutes or Birds, who though they have audible ſigns that expreſs ſomething of their Imaginations or Appetites, yet they extremely differ from humane ſpeech: 1. They are but ſhort and tranſient, like Interjections in ſpeech, whereby though they expreſs the ſudden motions of their Phantaſie, Appetite, or Paſſions, yet they carry not with them any diſtinct *ſeries* or long train of their Imaginations; they are ſhort and ſudden, ſomewhat like Sighs or Ejulations in Man. 2. They are not articulate, nor orderly, but ſhort, natural and broken. 3. When Birds, eſpecially by the fabrick of their Tongue and Palate, are taught to uſe articulate words, yet they underſtand not their import, nor do render any conceptions of their Phantaſie by them, nor can anſwer a queſtion by them, but uſe them inſignificantly, as the Organ or Pipe renders the Tune which it underſtands not.

And by the help of ſignificant and articulate ſpeech, one Man expreſſeth the notions or conceptions of his Mind to another, inſtructs another, mutual commerce and ſociety is maintained, which could never be without inſtituted ſigns.

And this Act of inſtituted ſigns, eſpecially thoſe of Speech or Language, proceeds from the entire *compoſitum*, the Mind inſtituting the ſigns, and communicating its notions and deſires by it, and the Palate, *Larinx*, Tongue, and Lips, forming the Voice according to ſuch inſtitution, whereunto they are moſt admirably accommodated by their Apertures, Nerves, and Muſcles.

2. The inſtituted viſible Signs, are Writings, Geſtures, Tears, Motions of the Eye, Mouth, and Face, which were long to enumerate: By means of writing, former Ages tranſmit the Memorials of ancient times and things to poſterity; Men underſtand the ſentiments, purpoſes, and deſires of one another, though abſent, and the living converſe with thoſe ancient Philoſophers, and others, that are long ſince dead.

And

And now in this compoſition of the humane Nature, we have theſe things obſervable;

1. That in this contexture of the Humane Body and Intellectual Soul we have a Creature made up, that is, *nexus utriuſque mundi, intellectualis ſcilicet & corporei.* The next Range of Beings above him are the pure and immaterial Intelligences, the next below him is the ſenſible Nature. Man is as it were the *Comes limitaneus* of each Nature, participating of both. And we may obſerve, that in the proceſs of Natural Beings, there ſeem ſome to be Creatures placed as it were in the Confines of ſeveral Provinces, and participating ſomething of either; as in things that have life and that have not; there is placed the Minerals between the inanimate and vegetable Province, participating ſomething analogical to either: Between the vegetable and ſenſitive Province there are Plant-animals, and ſome kind of Inſects ariſing from Vegetables, that ſeem to participate of both: Between the animal and rational Province, there ſeem to be ſome Animals that have a dark Image or reſemblance of the Influxes of Reaſon. So between the corporeal and intellectual World, there is conſtituted Man, participating much of both Natures: *Ita quod non tranſitur ad extrema niſi per media.*

2. That Man in his conſtitution ſeems admirably fitted to the convenience of his Nature, a little World accommodated with Faculties and Organs admirably convenient to it ſelf, a kind of entire State, Kingdom, or Republick within himſelf, fitted with all accommodations and requiſites for the due Regiment of himſelf, as a Senſible and Intellectual Being: He hath the Council or Senate of his Intellect, and her ſubſervient Acts and Faculties to adviſe him, the Empire and Regiment of his Will to command the *Satellites* and Miniſters of his Paſſions and Animal Spirits to execute his Conſcience for his Tribunal: There wants nothing within this little Circle of himſelf, which may be requiſite to order that little compacted Province for its Political Regiment.

And thus far concerning Man, as relating to himſelf, his Parts, Faculties, and entire Compoſition: It remains, that we take a little ſurvey of him, as he ſtands in relation to things without him; which is the laſt Conſideration that I promiſed in this brief Inventory of the Humane Nature and Excellencies.

The Humane Nature, thus fitted with theſe Faculties, is admirably accommodated to a threefold relation to ſomewhat without him, namely, To Almighty God: To the reſt of Mankind: And to this *mundus aſpectabilis* wherein he lives.

1. To Almighty God; for being a Creature endued with an Immortal Soul, endued with thoſe great Faculties of Underſtanding and Will, and thoſe *Facultates Ancillares* of his Affections, he is rendred into a capacity, 1. Of knowing Him: 2. Of knowing his Will, and what is acceptable to Him; for it is in a great meaſure inſcribed in his Soul: 3. Of being a fit Subject to Him, and to obey Him: 4. Of loving and truſting in Him: 5. Of glorifying of Him, eſpecially in the Contemplation of His Works, which are propoſed to his Senſe and Underſtanding: 6. Of Invoking and Worſhipping: And 7. Finally, to enjoy the Bleſſed Viſion of Him, by reaſon of the congruity of his Immortal and Intellectual Nature to ſuch a fruition. And thus we have him in his Duty, Religion; and in his Happineſs, Immortal Life.

2. To the reſt of mankind he is accommodated with Moral principles inherent in his Nature, and improvable by the exerciſe of his Faculties, as is before ſhewn; he is accommodated with Speech and Intellectual ſigns to maintain intercourſe and mutual communion and commerce; and his very diſpoſition and the mutual neceſſitudes of humane Nature neceſſarily maintain mutual offices and correſpondence between them; and the accommodations of Government and Laws are the fruit and productions of his Intellectual nature, and the ſupport of ſociety.

3. To the reſt of the viſible World; there is an admirable accommodation of the humane Nature and Faculties to the *Mundus aſpectabilis*, and of the ſeveral parts of it, and of them to it.

1. Of the Faculties of the humane Nature to the viſible Univerſe, eſpecially the vegetable and animal Natures, which by means of the admirable advantage of his Intellect, and that ſingular Engin of the Hand, he hath skill and power to ſubdue and bring under, whereby he exerciſeth dominion over them and protection of them, as the Vicegerent and Deputy of Almighty God.

2. Of the Univerſe and parts thereof to the humane Nature and Faculties, which were infinite to enumerate; I ſhall only inſert ſome of them.

1. A kind of awful ſubjection and fear of the greateſt part of the animal Nature, of him and to him; and though ſome be ſo hardy and unruly as to reſiſt him, yet he wants not power by the advantage of his Underſtanding and Hand to ſubdue and maſter them.

2. An accommodation of moſt of the things within the compaſs of the viſible Univerſe to his uſe and convenience, which though I cannot ſay it is the only or the prime end of their being, yet they are ſingularly accommodated to the uſe, delight and benefit of mankind, as might eaſily appear by an enumeration of particulars: The light, motion, and influence of the Sun and Stars; the nature, poſition and frame of Elements; the variety and concurrence of the Meteors; the fertility of the Land; the poſition of the Ocean; the interſperſion of the Rivers; the various Minerals, Vegetables and Animals; ſome ſerving for his food, ſome for his clothing; ſome for his labour and travel; ſome for his delight; the whole compaſs of Nature affording infinite variety of Inſtances of this kind.

3. An admirable accommodation of all the things in the World to his Faculties, and for their delight, advancement and improvement. He hath the perception of Senſe, to which all the viſible Objects of the World are preſented, and he hath the light and ſearching Faculty of his Underſtanding, which as it is qualified for ſuch an employment of Contemplation, ſo it hath a fruitful exhibition of Objects of great variety and excellency; the knowledge whereof doth not only delight and enrich his Faculties, but are ſo many manuductions to the knowledge and admiration of the infinite Wiſdom, Power and Goodneſs of the Creator and Upholder of them.

And thus I have given a ſhort and brief eſtimate of the peculiar Excellencies of the Humane Nature: I did not deſign a large or exact enumeration or deſcription of them: There is not any one particular above-mentioned but would take up the buſineſs of a juſt Volume, and

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I am eaſily conſcious that I have omitted many things that poſſibly might be of as great importance as any that I have mentioned; But this brief Inventory I have here given as preparatory to what follows, and to pre-poſſeſs the Reader, 1. That a natural Indagation according to the light of natural Reaſon touching the Origination of ſuch a Creature as this, is no contemptible or unworthy enquiry: 2. That ſurely ſuch a Creature as this thus accommodated could not have his Origination from any leſs than an Intellectual, moſt Wiſe, Powerful and Beneficent Being, the great God, Creator and Governour of Heaven and Earth: And this is the ſcope and end of my buſineſs in this Tract, the ſhort *Synopſis* whereof is as followeth.

There are two grand Opinions among the Ancients touching the Origination of Man: The firſt is, That Humane *Species* had no beginning, but was Eternal; the ſecond, That it had a beginning.

In the firſt place, I examin the ſuppoſition of the Eternity of Mankind in their ſucceſſive Generations: And in order thereunto I take up the conſideration of the Eternity of the World as it is now conſtituted, and, whether it be in Nature poſſible that it ſhould be ſo: I then deſcend to the particular conſideration of the Eternity of Mankind, whether although there ſhould be a poſſibility of an eternity of ſome permanent created Beings, whether yet there be a poſſibility in Nature, or any probability of evidence that Mankind can be eternal *à parte ante*, or without beginning.

This I oppoſe by Arguments of two kinds; 1. From the very repugnancy in Nature of ſucceſſive Beings to be without an inception, or eternal, and upon theſe kind of evidences I do indeed lay the principal weight and ſtreſs of my Concluſion, becauſe though theſe kind of Arguments may ſeem more obſcure, yet upon a due conſideration of them they are highly conſequential and concludent to my purpoſe.

2. The ſecond ſort of evidences are Moral evidences, wherein I take into conſideration moſt of thoſe Moral evidences that have been collected by others or thought of by my ſelf againſt the Eternity of Mankind: Whereupon I do conclude, 1. That ſingly and apart many of them are ſubject to exception, yet collectively they make up a good moral evidence touching a temporary inception of the humane Nature: 2. I do conſider the particular deficiencies of thoſe moral evidences taken ſingly and apart: 3. I ſubſtitute other moral evidences that even ſingly and apart have each of them a great moral and topical evidence of this truth, and are not capable of any conſiderable Objection againſt them, though taken *ſigillatim* and apart.

But when all is done, I lay the great ſtreſs of my Concluſion upon the firſt ſort of Evidences natural, or metaphyſical, which ſeem to me no leſs than demonſtrative; and therefore if no other moral evidences were added thereunto, or if thoſe moral evidences ſhould be capable of exception (as ſome of them are) yet the truth of the Concluſion againſt the eternity of Mankind is ſufficiently ſupported by thoſe that I offer in the firſt place, which I call Phyſical and Metaphyſical.

2. Again, I then come to conſider that Opinion which ſuppoſeth an inception of the Humane Nature.

I conſider the various *Hypotheſes* that the Ancients entertained touching the manner

manner of that Origination, and ſhew the abſurdity of them in their ſeveral orders.

I then conſider the Moſaical *Hypotheſis*, and the great reaſonableneſs thereof upon a bare Natural or Moral accompt, without taking in the Infallibility of Divine Revelation.

In order to that, I conſider the whole Moſaical Syſteme or Hiſtory of the Creation of the World, the admirable congruity it hath, both with it ſelf, and with a due and unprejudiced and conſiderate Reaſon.

And laſtly, I deduce certain Corollaries or Conſequences from the whole Diſcourſe, both Theoretical and Moral, and this is in effect the whole Method of what theſe Papers contain: Wherein I proceed meerly upon an account of Natural Reaſon and Light, becauſe in this Diſcourſe I deal with ſuch as are either only or moſt commonly guided and governed by ſuch Sentiments, and therefore I do not call in to my aſſiſtance the Authority of Divine Revelation, though that of it ſelf doth and ought to carry the full and unqueſtionable Aſſent of all good Men that are acquainted therewith.

CAP. III.

A brief Conſideration of the Hypotheſes *that concern the Eternity of the World.*

ALthough I intend not a large Diſcourſe touching their Suppoſitions that hold the Eternity of the World, yet it will be convenient a little to conſider it, for the better application of what follows in the enſuing Diſcourſe, touching the Eternity of the Succeſſions of Mankind, and the poſſibility or impoſſibility thereof.

The Suppoſition of the Eternity of the World is conſiderable under a double relation: 1. With relation to the Notion of Eternity: 2. With relation to the Subject it ſelf, which they would have eternal, namely, the World, either wholly or in ſome parts thereof.

In relation to Eternity it ſelf, two things are to be premiſed: 1. What it is; 2. What its Kinds are. 1. As to the former, in all this Diſcourſe I call that Eternal which is without beginning, or eternal *à parte ante*. 2. Things thus ſuppoſed Eternal may be of two kinds, either ſuch as have an Eternity ſimply independent upon any thing without it, or from which it ſhould derive that Eternal Being, as we and all good Men ſay that Almighty God is Eternal: Or elſe, ſuch an Eternity as yet ſuppoſeth its dependence upon Almighty God as its Cauſe. And they that attribute the firſt kind of Eternity to the World, muſt do it upon one of theſe two grounds, *viz.* That there is no other firſt Being, no firſt Cauſe, no God, upon whom the World ſhould depend, or from whom it ſhould derive this its Eternal Exiſtence: And this is the groſſeſt and moſt irrational Suppoſition, as well as the foulеſt Atheiſm, that can be imagined. Or elſe, That although there be in truth ſuch a Being as God, yet the World had not this its Eternal Exiſtence by any derivation or influx from Him,

Him, but hath it absolutely and independently. This is the *Epicurean* Atheism, which though it oppose the Eternity of the World in that consistency that now it hath, yet it asserts the Eternity of those small and infinite particles of Matter, and the coalition of them into that state wherein they now are in process and succession of time and motion, yet without any dependence of the one or the other upon Almighty God, whom he totally secludes from the concerns of the World.

Others there are again, that attribute an Eternity to the World, but yet withall acknowledge Almighty God, and also Him to be the Efficient thereof: And therefore though they attribute an Eternity to it, yet it is but a dependent Eternity, and so though it be Eternal, yet it is but an Eternal Effect of an Eternal Cause. These are much more tolerable than either of the former, for they assert a God, and likewise the dependence of the World in its Eternal Existence and Duration upon Almighty God, as the Cause and Root of that Being of the World.

But among those that thus assert this dependent Eternity of the World upon Almighty God as its Cause or Efficient, there seems to be two Parties, namely, 1. Such as suppose Almighty God the Necessary Cause of the World as his Necessary Effect. 2. Such as suppose Him meerly the Voluntary Cause of the World and of its Eternity. Of the former sort, that suppose Almighty God the Necessary Cause of the World and of its Eternal Existence, there seem to be these two Parties or different Opinions.

1. Such as suppose the World a meer natural and necessary Emanation from God as its necessary Cause, without any manner of intrinsecal freedom in Himself to do or be otherwise, and consequently it being a necessary and connatural Effect of the first Cause, it must be necessarily as ancient as Himself, and if Almighty God be (as He is) most necessarily, so upon the same necessity He is the Cause of the World, and the World a necessary, and consequently Eternal, Production necessarily flowing from the same; as if the Sun be Eternal, his Light, which necessarily flows from the Existence of the Sun, is likewise necessarily Eternal. This seems to be the Opinion of *Aristotle*, and some others that follow him.

2. Again some there have been, who will not have Almighty God to be a meer natural and necessary Cause of the World, but such a Cause as is a free Agent, *agens per intellectum & voluntatem*, and that the World was an Effect of Him, not as a natural or necessary, but as a voluntary and free Agent: And yet the World was necessarily Eternal, though freely willed to be Eternal. For they do suppose, that in as much as God Almighty is necessarily Good and Wise, and it is part of his Perfection to will what is best, and always to will it, therefore the Divine Will was always determined, even eternally, to will the Existence of the World, as a thing eternally consonant to the Perfection of his Nature, to will and always to will what is best: And there was never, in all the vast and boundless Period of Eternity, any one moment wherein he willed not to communicate his own Benignity and Bounty to something without Him; and therefore though he freely willed the World to be, as a free Agent, yet that freedom of his Will was from all Eternity determin'd, by the Perfect Goodness and Beneficence of his Nature, ever to will what He once willed, and consequently to will the World to be Eternally: Herein confounding the Divine Goodness with the Divine Beneficence

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and Benignity, the former being indeed neceſſary, but the latter under the Conduct and Guidance of his Free Will, indetermined by any thing but it ſelf.

Others there are that attribute the Being of the World to the meer *beneplacitum voluntatis divinæ*, neither determined as a meer Natural cauſe, nor determined by any intrinſecal obligation of his own Goodneſs; but only that he willed it becauſe he willed it, though moſt wiſely and bountifully: Many of theſe do not indeed conclude the World to have been eternal, but in conformity to the truth of the Sacred Scriptures conclude it to be created in the beginning of time, but yet do again conclude that there is nothing in the nature of the thing either on the part of Almighty God, or on the part of the World it ſelf, or on the part of the manner of its Creation which is inſtantanous and *per modum emanationis*; but that ſuch parts of the World at leaſt as have a permanent exiſtence, and are not in a flux of ſucceſſion, might have been not only in ſome period antecedent to that point of time wherein *de facto* it was created, but alſo that it might have been thus eternally created if the Divine *beneplacitum* had ſo pleaſed: And therefore many of thoſe do not conclude that it was ſo, but that it might have been ſo eternally created, yet freely and voluntarily without any of the two foregoing neceſſities. Thus *Aquinas*, *Suarez* and ſome others.

And thus having conſidered theſe various ſuppoſitions touching the divers qualities or qualifications of this eternal Exiſtence of the World, I ſhall now conſider the ſubject Matter which men would thus have to be eternal, or at leaſt poſſible to be ſuch, namely the World. And herein even many of the aſſertors of the Eternity of the World, or the poſſibility thereof, have (and not without cauſe) faln into divers concluſions.

By the World therefore we muſt underſtand either the Matter of the World ſimply in it ſelf, without being determined to this determinate Fabrick wherein it is; and thus it ſhould ſeem that all thoſe ancient Philoſophers that have aſſerted the Eternity of the World, as *Ariſtotle*, and before him *Otellus Lucanus*: or, that have aſſerted *novitatem mundi in hac conſtitutione*, have agreed; thus *Epicurus*, that aſſerts the coalition of Atoms into this Fabrick that we ſee, was of later edition than Eternity, yet aſſerts that theſe Atoms were eternal: and thoſe Ancients mentioned by *Ariſtotle* in the 8th of his *Phyſicks*, that held that the World was made, and unmade and made again by eternal viciſſitudes of *Amor & Inimicitia*, yet held the conſtituent Matter thereof eternal. And this ſeems to be the moſt comprehenſive acceptation of the World.

2. Again, by the World we may underſtand the World as it is now framed, the viſible World in that form and conſtitution as it now is: And thus it ſeems, *Ariſtotle* and thoſe others that hold it proceeds neceſſarily from God as a neceſſary cauſe, or as a cauſe determined by his intrinſick Goodneſs, have held the World to be eternal; but yet we muſt not reſt here. The World is like a goodly Palace, a fair large Building; but as in ſuch a Palace there is firſt the caſe or fabrick or *moles* of the Structure it ſelf, and beſides that there are certain additaments that contribute to its ornament and uſe; as various Furniture, rare Fountains and Aqueducts, curious Motions of divers things appendicated to it, as Clocks,

Clocks, Engins, *&c.* ſo in the goodly Univerſe there are the great Structure it ſelf, and its great integrals the Heavenly and Elementary Bodies, framed in ſuch a poſition and ſituation, the great Sceleton, as I may call it, of the World: But beſides this there are very various and curious furnitures and accommodations of the Univerſe, as for inſtance, in our inferior World various Animals, Vegetables, Meteors, Minerals, Mixtures, and Men; and in the Heavenly Bodies various Motions and Aſpects.

Now it will be neceſſary for him that aſſerts the Eternity of the World as now it ſtands, or the poſſibility of ſuch an eternity, to conſider whether he applies his aſſertion to the whole World, as conſiſting not only of the greater integrals whereof it conſiſts, as the Heavenly and poſſibly the Elementary Bodies; but alſo of that furniture thereof conſiſting of Men, Animals, Vegetables, Meteors, Minerals, and thoſe accommodations that are to it, as the Motions of the Heavenly Bodies; or whether he intends only ſome parts of it which ſeem more capable of an eternal exiſtence, as being more fixed, and in themſelves permanent, and ſo more able to ſuſtain an eternal and conſequently an immutable exiſtence.

And upon examination we ſhall ſhall find either of theſe choices full of incurable difficulties, if not utter impoſſibilities, in relation to an eternal exiſtence of the World or any parts thereof.

And this I ſhall in the order of this Diſcourſe evince againſt all thoſe former ſuppoſitions of Eternity; namely, 1. Againſt thoſe that aſſert an independent eternal exiſtence of the World: 2. Againſt thoſe that aſſert an eternal but dependent exiſtence thereof upon Almighty God, as a meer natural and neceſſary Cauſe thereof: 3. Againſt thoſe that aſſert an eternal exiſtence of the World dependent upon God as a free intellectual and voluntary Agent, but yet determined in his external emanations by the neceſſity of the Goodneſs and Beneficence of his nature: 4. Againſt thoſe that aſſert at leaſt a poſſibility of an eternal exiſtence of the World, but dependent upon the freedom of the Divine Will undetermined by the neceſſity of his Beneficence.

Firſt therefore concerning the ſuppoſition of the Eternity of the World in general; I ſhall not in this place diſpute whether there be an utter impoſſibility of any material Being to be either independently or dependently eternal; enough may be ſaid againſt it from the incapacity of any material Being to ſuſtain ſuch a kind of duration *à parte ante*, and yet without any derogation to the Divine Omnipotence or Goodneſs, which though infinite, yet cannot communicate ſuch a duration to that which in its own intrinſick nature is not capable of it: Nor ſecondly, ſhall I diſpute whether there be any ſuch material or corporeal Being or Beings within the compaſs of the Univerſe, that hath or may have ſuch a kind of permanence or fixedneſs in being that may be capable of an eternal exiſtence *à parte ante*, either dependently or independently upon Almighty God; admitting by way of argument, but not granting it poſſible, that in the nature of the thing ſome material or corporeal Being may be of ſuch a fixed, permanent conſiſtence as may ſuſtain ſuch an eternal exiſtence; and I here omit this diſpute not becauſe I make the leaſt doubt of the beginning thereof by Creation, but becauſe theſe are matters that

require a longer and ſtricter proceſs of enquiry and debate than I intend in this place: and therefore I ſhall deſcend to things that are more plain and evident, and yet ſuch as will abundantly ſerve my deſign in the inquiry in hand.

And therefore for the preſent I ſhall *gratia argumenti* admit or ſuppoſe, 1. That there are or may be ſome corporeal things in the compaſs of the Univerſe that may poſſibly be of ſuch a fixedneſs, ſtability and permanent nature, that may ſuſtain an eternal exiſtence, at leaſt dependently upon the ſupreme Cauſe. 2. And that poſſibly Matter it ſelf undetermined to any particular form, or under any particular conſtitution; the Heavenly Bodies, the Elementary Bodies, and ſuch as ſeem to have a ſimple nature; and poſſibly their figure, poſition, and ſituation may be ſuch as might have this eternal exiſtence, as the Sun, the Stars, the *Æther*, the four Elements; we will, for avoiding diſpute touching it for the preſent, admit them to have been, or that poſſibly they might have been of that nature, quality, diſtance each from other eternally as now they are, like the great integrals and contignations, figure and concamerations of a goodly Palace: Theſe things I ſay, though in themſelves moſt certainly untrue, I ſhall for avoidance of difficult diſputes admit at preſent. Yet I farther ſay, that though all theſe things were admitted, yet there are ſome great and conſiderable parts and integrals, and appendications unto the *Mundus aſpectabilis* that we ſee, that are purely impoſſible to be eternal, and do *de facto* appear ſo to be; and conſequently it is apparent that the World in its full latitude and comprehenſion cannot be eternal.

And herein I ſhall not fix upon little or inconſiderable things, but upon ſuch as highly contribute to the excellency, beauty and uſefulneſs thereof; neither ſhall I fix upon individuals which are apparently tranſient, and neceſſarily have their beginning, duration and end in certain known determinate portions of time, as is evident in the individuals of all kinds or *ſpecies* of mixed, ſublunary Natures: But I ſhall apply my ſelf to the *ſpecies* themſelves, which moſt that aſſert the eternity of the World aſſert to be eternal, or to ſuch individuals as are the ſingle Conſervators of their own *ſpecies*.

And in this debate I ſhall take my meaſure from things in Nature as I find them; and it is reaſonable I ſhould do ſo, eſpecially conſidering that this Diſcourſe concerns principally the Judgments or Opinions of thoſe men that are the great aſſertors of Nature, and the eternity of thoſe Laws, Rules, Orders, or Methods of Nature which they now find and obſerve in it: And it were a great vanity and raſhneſs eſpecially for ſuch men to reject thoſe reaſons which are drawn from the nature of things as now they appear, or for them to go about to anſwer thoſe reaſons by ſuppoſitions of a variety in things from what they now appear. If therefore the ſtate and method of things to be inſtanced in, as they now appear, do involve a repugnancy to an eternal exiſtence, the Arguments drawn from that Suppoſition muſt be concluſive, at leaſt to thoſe great Prieſts and Venerators of Nature and its appearances.

Thoſe things therefore that I would inſtance in, as in their own nature uncapable of eternal exiſtence *à parte ante*, are theſe:

1. All things that are of all hands agreed to be concreted of other things, and neceſſarily in their own nature require a pre-exiſtence of

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thoſe more ſimple Bodies out of which they are concreted, and a pre-exiſtence of ſome preparatory antecedent motion for their coalition, mixtion and concretion; as Animals, Vegetables, Minerals, Meteors, and regularly all mixt Bodies.

2. All things that are in their own nature ſucceſſive, as all Motion, Alteration, Generations, Corruptions, and all things that in their own conſtitution have as it were intrinſecally annexed to them, or at leaſt neceſſarily belonging to them in reſpect of their ſituation and poſition, and juxta-poſition to other things, a neceſſary ſubjection to alteration or corruption.

3. All things that do not, nor (their nature conſidered) cannot perſiſt in one immutable ſtate, but have variety in the nature and manner of their exiſtence neceſſarily by the laws of their nature annexed to them.

Theſe things conſtituted and being in that ſtate we find them, cannot without a total alteration of their nature and being from what in truth they are, nor in the ſtate of nature wherein they are placed, can they be eternal or without beginning: And theſe are very conſiderable and momentous parts or appendices of the World, and if it had been eternally without theſe, it had been a very lame and defective World, and ſuch as the wiſeſt man under Heaven could hardly underſtand for what uſe it would be, or why it ſhould have continued in ſuch a defective condition from the endleſs period of Eternity: Or at leaſt if it had its uſe and beauty, certainly it had not had the ſame uſe that now it hath, nor the ſame beauty that now it hath.

And the conſequence thereof is of great moment and importance, *viz.* If theſe great acceſſions to the World, whereof I am ſpeaking, could not be eternal, and yet without them the World would have been greatly deficient from what it is, the greateſt Arguments for the Eternity of the reſt of the World will neceſſarily fall off: for the ſame reaſon that concludes for the neceſſity of an eternal exiſtence of the World, would as effectually conclude for the eternal exiſtence of that which highly conduceth to the beauty, uſe, and ends of the Univerſe, which yet we ſhall find cannot be eternally exiſting, as it concludes for the eternity of ſuch integrals of the World which poſſibly might be eternal. Again, if it be inconſiſtent with the nature of many of thoſe things eternally to be, which yet contribute much to the glory, beauty, uſefulneſs and excellency of the World, as mixt Bodies, motion, and alteration; how can we think that there is a neceſſity in the Divine Nature to have made that Caſe or Sceleton of the World from eternity which ſhould have been in ſo great a meaſure uſeleſs, and wanting that beauty, order, uſe and perfection which it obtains from the contribution of mixt Bodies, motions, and alterations? And what could be thought a ſufficient motive to have had an eternal Carcaſs of an Univerſe wherein the materials and poſitions of it were eternally laid together, and to conſiſt infinite millions of Ages; and yet that which gives it its beauty and ornament and uſe, at leaſt in a great meaſure, muſt be brought to a beginning five, or ſix, or ten thouſand years ſince, and not before? The nearneſs or novity therefore that is neceſſarily required in theſe great contributions to the beauty and uſe of the Univerſe is a great evidence of the novity of all the reſt:

And therefore although the Houſe muſt be built ſome time before it be furniſhed, and the Watch muſt be made, the materials formed, adapted and fitted, and the whole put together before it be put in motion; yet it were unneceſſary and vain to ſuppoſe the Caſe or Fabrick of the Houſe, or the Fabrick and Compoſition of the Watch, were an infinite time before its furniſhing and ſetting into motion.

But to the buſineſs it ſelf, and the Inſtances above given:

1. It ſeems inconſiſtent with the Nature of mixed Bodies that they ſhould be eternal, for then they muſt be as ancient as thoſe ſimple Bodies out of which they are taken.

That there are in our inferior World divers Bodies, that are concreted out of others, is beyond all diſpute. We ſee it in the Meteors; the Clouds are attracted out of moiſt and watry, and alſo earthy Vapours; Stones and Minerals do grow and ariſe in the Earth, out of the *ſuccus terreſtris* digeſted by the heat of the Sun: Divers Vegetables, and ſome Animals, *ſponte nata*, ariſe from the temperament of the terreſtrial and watry Matter, the inſinuations of the *Æther* and Air into it, and the influence of the Sun: Other Animals, and ſome Vegetables, have a more regular production from Seed, as ſome of the perfecter ſort of Vegetables, and the nobler Animals, and Men; which ſeminal Principle is a mixture of the divers particles of Matter and Spirits, derived and elicited from the Plant or Animal.

And as it is apparent, that there are ſuch mixt Concretions, ſo it is apparent, that before the actual concretion of theſe mixt Bodies there muſt be pre-exiſtent to it: 1. The Matter, or more ſimple Bodies out of which they are concreted: Again, 2. There muſt be antecedent to it that Ethereal or Solar heat, that muſt digeſt, influence, irradiate, and put theſe more ſimple parts of Matter into motion and coalition: And 3. Before the full and perfect formation of this concrete, there muſt be a preparation, and digeſtion, and formation of this Matter, before it come into a perfect Concrete, be it of what kind ſoever; and this preparation, digeſtion, and formation, requires a competent *mora*, or time, antecedent to its complete and full conſtitution. All theſe are evident, in a more ſpecial and eminent manner in the production of Animals and Vegetables, but I ſhall at preſent take the Inſtance, that is obvious every day in our Gardens, in the production of a common Flint or Pebble: Firſt, there is the more ſimple Matter, out of which it borrows its ſubſtance, namely, the Earth, and the Water or Moiſture; then there is the heat of the Sun, that digeſts and concocts both; then there is the conjunction and coheſion of the Matter into a more looſe, or indigeſted and ſofter conſiſtency like Mortar or Clay, and thereby it is prepared to the concrement of a Pebble or Flint, which poſſibly in a week or a month it perfectly obtains. Every Man muſt needs ſee, that in the natural courſe of things this Pebble doth ſuppoſe, as pre-exiſtent to it, the more ſimple Matter out of which it is deſumed, the heat and influence of the Sun, and the due preparation of the Matter; which takes up a competent time, and that neceſſarily, before this Pebble had its complete Being: And conſequently, in the courſe of Nature, it is impoſſible that any Pebble was eternal, for it neceſſarily required theſe things to have been before it could be, and yet if it were eternal, it muſt have been as ancient as

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that Earth, and that Water, which was its material conſtituent, and as that Sun, whoſe heat digeſted it, or coagulated it, or as that preparation which preceded its conſiſtence.

And though this Inſtance be of one Individual, and that of the baſeſt nature, yet the very ſame reaſon holds in all mixed Bodies, as in Meteors, Comets, Minerals, Vegetables, Animals, their Seeds and Productions. The conſequence of this is, that it is impoſſible that mixed or compounded Bodies can be eternal, becauſe there is neceſſarily, according to the Rules of Nature, a pre-exiſtence of the ſimple Bodies out of which they are deſumed, and an antecedence of their conſtitution preceding the exiſtence of mixed Bodies.

If any Man ſhall object againſt this Reaſon, and ſay, That it deſtroyeth my own Foundation, which ſuppoſeth a creation or concrement of thoſe very Bodies which I ſuppoſe to be mixed, as Animals, Vegetables, *&c.* without all this preliminary proceſs, or orderly antecedency of ſuch circumſtances, as are now in the courſe of Nature, as it ſtands ſettled, neceſſary to their production: And that, as I do ſuppoſe, all created Beings had at firſt their primitive production by the *Fiat* of the Divine Will and Power, ſo in the defence of that Suppoſition or Concluſion, I muſt ſuppoſe another method of production of mixed Bodies, than what we now find in Nature as it ſtands ſettled.

I anſwer, That it is true, I muſt and do ſuppoſe another kind of method in the firſt and primitive Conſtitution of things by Creation: But it ſtands and conſiſts with, and is conſonant to my whole Suppoſition, and indeed my general Suppoſition cannot poſſibly be or conſiſt without a Suppoſition alſo, That the firſt conſtitution and coalition of mixed Bodies was quite of another frame or method, than what now obtains in ſettled Nature.

But the Objector muſt conſider againſt whom and what kind of Opinators the Reaſon above given is levelled, who take all their Meaſures from things as they now ſee them in ſettled Nature, and do thereupon aſſert, That the order and method of the exiſtence and production of all things was eternally the ſame as now it is. And therefore certainly this Reaſon is fully concludent againſt thoſe perſons that would ſuppoſe an Eternity in all things in the World, independent upon the firſt Cauſe and Efficient: For certainly thoſe of their Principles do and muſt needs ſuppoſe, that things had no other method of their production than what we now ſee they have, and therefore they muſt (if they hold to their Principles) agree that they had their production always as now they have: The neceſſary conſequence whereof is, that if ſuch a kind of production of mixt Bodies cannot in the nature of the thing be eternal, they cannot have an eternal production.

But it is true, that this doth not anſwer the Suppoſition of thoſe, that though they ſuppoſe an Eternity in mixt Bodies, do attribute even that Eternity to an eternal Creation, and therefore to another kind of production than what we now ſuppoſe to be natural, and conſequently as they ſuppoſe, at firſt in an eternal moment Almighty God created ſimple Bodies, as the Heavenly or Elementary Bodies, ſo in the ſame inſtant He might and did create other Bodies, which though in their conſtitution they were or might be compoſed of ſuch particles, as had they been aſunder

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and divided, might have been of the ſimple nature of thoſe ſimpler Bodies, yet they were in the ſame eternal moment or inſtant created and put together without any priority of exiſtence in thoſe ſimple Bodies whereof they might otherwiſe conſiſt; nor were ſuch mixt eternal Bodies ſucceſſively deſumed or compounded out of the pre-exiſting ſimple Bodies, but con-created and put together in the ſame eternal and indiviſible moment or inſtant: ſo that a Mineral for the purpoſe might be created in the ſame moment wherein the elementary Earth was created. And although after the completing of the whole Frame of Nature in that eternal, indiviſible, intelligible moment, the production of mixt Bodies either by ſpontaneous or contingent coalition of various particles of Matter, or by an univocal generation, the courſe that is now held in Nature might be obſerved, and that Priority of particles of ſimple Matter, Influx of the Heavens, and Preparation of Matter might be antecedent and precedaneous not only in order but in time to their ordinary productions; yet at firſt it might be, and was otherwiſe in the primitive conſtitution of ſuch mixt Bodies as had their original by Creation.

I do confeſs this Suppoſition may evade the illation made upon the Natural production of mixt Bodies, but then we muſt remember that this quite departs from the method of things as they now ſtand in the courſe of Nature; neither can any man conclude that it was or could be ſo from the obſervation of the Order or Cauſe of Nature, or any rational deduction from the ſame, but muſt have recourſe either to bare Notion or Conjecture, or elſe to Divine Revelation; the former ſeems ſomewhat too light, ſoundly to ground any *Hypotheſis*; and the latter, namely, Divine Revelation, though it doth diſcover unto us that things had their production in a different way in their firſt Conſtitution or Origination, namely, by the almighty Power of God creating them, yet withall it informs us that that origination was not from Eternity, but in the beginning of Time, which wholly overthrows the *Hypotheſis* of an Eternal Creation of the World: If therefore they will appeal to Revelation for their Creation, they muſt be concluded by it, not to ſay it was eternal.

2. My ſecond Reaſon is this, Becauſe all things that are in their nature ſucceſſive muſt have a firſt beginning of their being, and cannot be eternal. But there are in the World many things of great note and moment (and without which the Order and Uſefulneſs of the Univerſe would be deficient) which have a ſucceſſive nature; and therefore ſuch things cannot be eternal or without beginning: And this reaſon concludes forcibly as well againſt that independent Eternity ſuppoſed by ſome of the Ancients, as that Eternity dependent upon Almighty God, whether as a neceſſary Cauſe, or as a free voluntary intellectual Cauſe determined by the neceſſary Goodneſs and Beneficence of his nature; or as a perfectly free Agent, determining his Will by his own *beneplacitum* thus eternally to produce the World.

The Aſſumption or minor Propoſition, That there are many things in the World of great moment and importance to it that are in their own nature ſucceſſive, is apparent; ſuch are all the Individuals of *Species* of corruptible things, that yet notwithſtanding have a continued ſucceſſion in their individuals, as Vegetables, Animals, and Men, that ſucceſſively propagate their

their kind. 2. All kinds of Motions to which all natural Bodies are in ſome kind or other ſubject, as the motions of Generation and Corruption, Augmentation, Diminution, and Alteration that are unceſſantly incident to all ſublunary Bodies, and they muſt change their nature and ceaſe to be what they are, before they can ceaſe to be actually ſubject to alterations; ſuch is alſo Local motion, communicable not only to the inferior and ſublunary Bodies, but alſo to celeſtial Bodies, and this motion even of the Heavenly Bodies themſelves ſeems to be partly continued and uninterrmitted, as that motion of the Firſt Moveable; partly interpolated and interrupted, as ſome affirm of that *Motus trepidationis*; ſometimes of acceſs and receſs, as the Annual motion of the Sun, wherein ſome have thought there is a ſmall, though impeceptible, reſt in the very point of returning, which we call Solſtices.

The major Propoſition, namely, that ſuch ſucceſſive things cannot be eternal, includes two Affirmations, *viz.* 1. That the motions or ſucceſſions themſelves cannot be eternal or without beginning: 2. That the things that have neceſſarily and inſeparably theſe motions or alterations annexed to their nature cannot be eternal, ſo long as we ſuppoſe them neceſſarily accompanied with theſe alterations: The former of theſe is conſiderable in this place, the other is conſiderable under the next Reaſon.

Now touching the impoſſibility of the eternal ſucceſſion of the *Species*, whether of Men, Animals, or Vegetables by natural propagation or proſemination, the ſame and the Reaſons thereof ſhall be fully delivered when we come to the particular conſideration of the Origination of Mankind, and the neceſſity of fixing in ſome common Parents of the individuals of Mankind, and thither I ſhall refer my ſelf.

As touching the eternity of any kind of Motion, eſpecially even of that of the Heavenly Bodies, I ſhall ſay ſomewhat briefly in this place which will be eaſily reducible to any other of the motions in the World, as namely the motions of Generation, Corruption or Alteration, all which are in ſome reſpect but the effects of Local motion of one kind or another.

And there ſeem to be two ſpecial Reaſons even from the intrinſecal nature of the things that encounter the poſſibility of an eternal ſucceſſive duration in them: The firſt concludes againſt all imaginable eternity of Motion of the Heavenly Bodies, whether independent or dependent upon Almighty God; the latter indeed principally concludes againſt the poſſibility of the created or dependent eternity thereof. And they are theſe:

1. If the circular motion of the Sun or Heavens were eternal, then there muſt be two circulations of the Heavens immediately ſucceeding on the other Eternal; the conſequence whereof yet would be, That the one of thoſe circulations would be neceſſarily before the other by the ſpace of twenty four Hours, which would be impoſſible; for then the next ſucceeding circulation would not be ſo ancient as the firſt, and yet both ſhould be eternal, which is impoſſible and repugnant.

This Reaſon a late Philoſopher hath made uſe of in ſubſtance, but in a different method, namely, That if the circular Motion of the Heaven were eternal, then of neceſſity there muſt be granted ſome one circulation

of

of the Heaven to be distant from us by an interposition of infinite Circulations: This consequence must needs be true, and yet it would perfectly destroy infinite Circulation of the Heaven; for it would necessarily from hence follow that all the intermediate Circulations were finite, and determinate on both ends; at this end with that Circulation that is presently in motion, and *à parte ante* with that Circulation that is supposed to be infinitely distant from us, which excludes any possibility of infinitude in Motions intermediate. And if it be said that the first of these intermediate Circulations is likewise infinitely distant from this, then it should be infinitely distant and yet the next precedent Circulation should be before it, which destroys the very nature and reason of infinitude. And if it shall be said that that next succeeding Circulation after that which is so supposed infinitely distant from what is now currant, is distant from us by a finite interval, and not infinitely, then that one Circulation which preceded it, and must necessarily be like ours, and consequently absolved in the space of twenty four Hours, shall by its accession to a finite number of Circulations, or consequently to a finite interval of duration, make up an infinite succession and an infinite duration; the addition of that one antecedent Circulation shall make the intermediate finite Circulations infinite, and the addition of a period of twenty four Hours (the uttermost extent of one Circulation) shall make a finite time or interval infinite, which are intolerable absurdities, and yet necessary consequences upon the supposition of the eternal Motion of the Heaven or Sun; or if you will, of the Earth, as the *Copernicans* will have it.

2. A second Reason is this, which though it be but a different and farther explication of the former, yet it renders it clearer and in more perspicuous terms, which is this: Whatsoever once was and now is not, as it is now past, so it was once present, and before it was so present was future: Take it in the former Instance; It is not possible that there could have been any Revolution of the Heaven that is now past, but that the same was once present; as whatsoever now is, is necessarily whiles it is so; whatsoever hath been, was necessarily whiles it was; *in præteritis non est contingentia.*

The consequent whereof is, that whiles it is impossible but that the remotest Revolution of the Heaven once was present, That Revolution when present, was necessarily the *Epocha*, the *terminus* from whence all other succeeding Revolutions took the course or journey; and yet this remotest Revolution could not be of a greater period than 24 Hours, which was not sufficient to make it eternal, yet all the succeeding Revolutions took their rise and journey from it; and must needs be closed within two bounds, namely, the most remote and the present Revolution.

Again, if it be impossible that there can be any Revolution now past which was not once present, then the most remote was once present, and at that time when it was so present had none before it or more ancient than it; and that Revolution being such as now we have, must necessarily have its beginning within the space of twenty four Hours, before which it was not, and consequently when it was so present could not be eternal; and consequently all the Revolutions that succeeded came after it, was terminated by it, and by such a Revolution that when it

was

was present had a beginning and could not be eternal, nor consequently all the Revolutions that hapned since that first, which are *utrinque clausa*, namely, with that which is remotest, and with this that now is in motion.

3. Whatsoever bodily Being is created eternally, must necessarily be created in some certain *situs* or disposition, and must of necessity remain an eternal duration in that *situs* or disposition wherein it was so created. For instance, if we should suppose the Sun created eternally, we must necessarily suppose 1. That he was created in some determinate *ubi* or *situs*, for that is undispensably necessary to every created individual Body; and therefore if he were eternally created we must suppose him created *in tali vel tali plaga mundi*, suppose we to be above our Horizon, or below it. 2. It must necessarily be, that in that *ubi* where he was so created, that he must by an eternal space or duration abide in that *situs* or *ubi* where he was so created; and he must (it is true) have a disposition to motion, but he must be *in dispositione tantum ad motum* by an infinite tract of duration: For if we shall suppose that he staid in his *situs* of his Creation but an hour, or a day, or a moment, and then set out to move, that moment of his existence before he moved would terminate and bound the duration of his motion, which could not be eternal because it had an antecedent moment before it, which secludes it from eternity: Neither can we suppose him to be eternally created in motion, for he must be before he can move, and must also have a *terminus motus à quo*. But suppose we might imagin him to be in the very first eternal imaginable instant of his eternal being put into motion, yet the *terminus* of that motion must necessarily be that *ubi* and *situs* wherein he was created, which would necessarily be the antecedent circumscription of the line of his motion; and if the line of his motion hath necessarily a *terminus* of its inception, it must of necessity have a *terminus* of its duration, and cannot be infinite in duration *à parte ante*: And as to this purpose there will be no manner of difference between a circular motion and a streight motion, if we could suppose in the vast abyss of imaginary infinite space there were some one determinate point from whence a direct local motion should be supposed to begin its motion, the line that such a streight motion should make would be finite, and consequently an infinite time could not possibly be consumed in such a motion. And upon the same account if the Sun were created in any point of the Hemisphere, and then presently took his start or motion to the West, and so onward in his circular journey, it were impossible that the line of that motion should be of an infinite extension, but being drawn out at length like a clew of thred wound off from a bottom, it would be of a finite extension, and consequently the period of that motion could never be infinite. For *Aristotle* tells us truly, that an infinite time can never be drawn out in a finite motion, nor an infinite motion be absolved in a finite time: This Reason the acute and judicious *Suarez*, 2. *Metaph. disp.* 29. *sect.* 1. borrows from *Antonius Ruvio*, and though according to the opinion of *Aquinas* he be a stiff assertor of the possibility of the Eternal Creation of the World, *ibid. disp.* 20. yet he frankly confesseth and maintaineth that Motion is of such a nature as is not capable of an eternal duration *à parte ante*; and thereupon concludes, *Propter hanc ergo causam existimo*

Æternitatem repugnare Motui, & Motum includere repugnantiam cum quadam immutabilitate, quam includit Æternitas: Ideoque de facto motum non solum non esse æternum, verum neque esse posse. Igitur ex motu æterno colligi non potest Motor eternus vel immaterialis.

And now let any Man consider what is gained by the Supposition of an Eternity of the Bulk or Carkass of the World, when yet it cannot hold with it in consort an Eternity of Motion: 1. That we must separate from Bodies that which is most connatural to them, especially the Heavenly Bodies, and this for an eternal period, 'till put in motion within the limits of time. 2. We shall hereby separate from the Body of the Universe for an eternal period that which renders it most useful, and most beautiful: To suppose an Eternal World, and yet eternally destitute of Motion, were to suppose the whole Universe destitute of Life, and all Vegetables, Animals, Meteors, the Ebbing and Flowing of the Sea, the whole Furniture at least of this inferiour World, to be none but dead, liveless, stupid Beings, for such it certainly would be, if the Heavenly Bodies should be destitute of their Motion.

And therefore it seems wholly disagreeing to Reason, that the World should be eternal, when it is evident, that Motion (which as *Aristotle* truly tells us is, *Vita quædam omnium mobilium*) cannot be eternal, and so there should be an eternal useless Carkass of a World from all Eternity, without that life of it, its Motion.

And on the other side, it seems more consonant to Reason, that the Fabrick of the World did not long antecede its Motion, and that since Motion is not, cannot be eternal, so neither is the Fabrick of the World, but they both began at least very neer together, and the World was not made from Eternity to lye fallow and uninhabited during that infinite abyss of its pre-existence to its first putting forth into any Motion, for such it must be, if destitute of Motion. And consequently the evincing of an impossibility of an eternal successive Motion, doth not only evince, that the whole World, with all its considerable Appendices, was not eternal, but doth with great evidence enforce, that the great Integrals of the World it self were not eternal, which had been imperfect without Motion.

And this doth salve two Objections at once, *viz.* 1. That drawn from Gods Omnipotence, that could have made the World eternal, if He pleased. The Answer is: That whatever could have been done in reference to the Rest of the World, yet as in reference to successive Motion the same could not have been made eternal, and yet without derogation to the Divine Power or Omnipotence, but because the nature of the thing could not sustain or bear such a duration.

And likewise this answers the Argument for the Eternity of the World, drawn from the Divine Benignity and Goodness, whereby He is supposed to be under a kind of intrinsick necessity of doing all the good He could, and consequently to make the World eternally. I answer, 1. That as before the World, in its complement and perfection with the advantage of Motion, though there was no determinate time, point, or period, but God might have made it sooner if He had pleased, yet (with all due reverence to His Majesty) it could not have been in its complement and perfection eternal, because its successive Motion could not be eternal, nor con-

consequently all that glory, beauty and usefulness which accrues to the Universe by that successive Motion. 2. That although the Divine Will be determined by the Divine Perfection necessarily to will his own immense Goodness, yet he is not determined by his own Benignity necessarily to will any thing without himself; his own essential Goodness he wills, and that necessarily, and *ad ultimum posse*; but his Benignity is measured out *ad beneplacitum voluntatis*, and not by an absolute necessity *ad ultimum posse*: And therefore although it were admitted that he could have eternally made the World, or made more Worlds or better Worlds, yet he was not bound to it, because the emanations of his Benignity are not necessary, but governed in their extent and measure *juxta voluntatis beneplacitum*. 3. And upon the same account also, though he could have made the World sooner than he made it, yet he was not bound to it, but to make it when and how he pleased, though all his Works carry the impression of transcendent Wisdom and Goodness.

And therefore as these Reasons seem strongly to conclude 1. Against the very possibility of an eternal duration of those things that gave the principal ornament, beauty and usefulness to the Universe, namely, Variety and Succession of Individuals and *Species*, and Motion, so they do, at least *de facto*, evidence that if the rest of the Universe were able to sustain an eternal duration, yet they did not, because these would be very defective without those that cannot hold that state of Eternity with them.

2. Against the truth of that Reason and Assertion, That Divine Goodness did intrinsecally necessitate his Will to create things in their best state from Eternity, since it seems evident that the condition and state of many things in the Universe that give it much of its usefulness, perfection and beauty, namely Motion, and Succession of Generations and Corruptions, of Animals, Vegetables and Men, are impossible to be as ancient as that intrinsick Goodness of the Divine Nature, which is as eternal as his own most perfect being.

3. I come now to the third Reason against the Eternity of considerable parts of the World, which is this; Sublunary Bodies, whether simple or mixt, are by the necessity of their nature subject to alteration and corruption: But whatsoever is subject thus to alteration or corruption, is incapable of sustaining an eternal duration *à parte ante*, and consequently sublunary Bodies are not capable of such an Eternity.

The first of these Propositions, namely, That all sublunary Bodies are subject necessarily to alteration and corruption: This naturally happens to sublunary Bodies upon both or one of these accounts, 1. From an intrinsecal Cause, which is principally seen in mixt Bodies, in which the band and ligament between Matter and Form, nor of the parts of Matter themselves is not so strict and tenacious, but that they must necessarily in process of time fall asunder. Besides, by the continual contest between those contrary qualities bound up together in them, there do arise unceasant alterations, and at last final dissolution of them, even from within themselves 2. From extrinsecal Causes: For the very necessary composure and position of things in the World is such, that there is a vicinity between Agents and Patients, and contrary dissenting active Qualities, that the one incessantly invades the other, and alters,

changes, intends, remits and corrupts the other; which perpetual *luctæ* is ſeen daily not only in the mixed and compounded Bodies, but even in the more ſimple elementary Bodies, which daily invade, change, alter, and corrupt one the other according to their various degrees of activity, contrariety and vicinity each to other.

And if the World had been eternal, we muſt ſuppoſe it eternally conſtituted of ſuch natures ſo placed and diſpoſed in ſuch ſituation and conſtitution as now they ſtand, or otherwiſe, we do not reaſon *ad idem*, the World otherwiſe ſhould have been of another make, conſtitution and poſition than now it is; things corruptible muſt have been incorruptible, and the vicinity, activity, contrariety and poſition of things and their natures and qualities muſt otherwiſe have been quite different, and ſo our debate would be transferred quite to another World of another nature and conſtitution from that touching whoſe Eternity we now diſpute.

The ſecond Propoſition is this, That whatſoever is ſubject to ſuch alteration or corruption cannot poſſibly be eternal, at leaſt unleſs we ſhall wholly remove from it by an infinite duration that corruption or alteration to which it is thus neceſſarily ſubject, and ſo make it another thing than what indeed it is.

And becauſe the due and clear explication of this Truth renders the Aſſertion plain in it ſelf, I ſhall diſtinctly examin it; and becauſe we have ſuppoſed that the corruption of things corruptible, and the alteration of things alterable depends, as before, upon a double Principle, *viz.* That intrinſecal defectibility of the connexion or union of the parts of things corporeal, which is rooted in the very Nature of the things themſelves; and 2. From the vicinity of other contrary active Principles endued with contrary active Qualities which mutually invade one another; which poſition (conſidering the Frame and Conſtitution at leaſt of this inferior World, is abſolutely neceſſary, unleſs we ſhall make the World another thing, and of another Fabrick than what it is) as the moiſture of the Water is contiguous to the dryneſs of the Earth, and the heat of the Sun is contiguous to the coldneſs and moiſture of the Water, and cannot be otherwiſe in the Conſtitution of the World as now it ſtands, and conſequently one muſt neceſſarily work an alteration in the other: I ſhall therefore purſue the ſame method, and firſt conſider ſuch Bodies as ſeem to have an intrinſick principle of alteration or corruption from the diſſolubility of their parts, and the coadunition of ſeveral particles endued with contrary and deſtructive qualities each to other; or ſuch as at leaſt tend to a gradual alteration. And ſecondly, I ſhall conſider ſuch parts of the Univerſe as do mutually act one upon another, and thereby induce corruption or alteration of one by another, according to the prevalency and activity of the one or the other.

But before I come to either of the particulars I ſhall premiſe ſome things which will be of uſe in all that follows, *viz.* 1. That precedaneous to all Generation of any material Being, according to the courſe of Nature which we ſee, there muſt be a gradual preparation and alteration of the matter before there is a complete generation of any thing: This we ſee in the caſual production of Inſects and Vegetables, and in the natural production of Minerals or Meteors, and in the regular production

duction of Animals and Men. 2. That in things which yet hold their essential consistency, yet there are very many alterations, not only accidental, as where things are rarified or condensed, or made hot from being cold, or cold from being hot, but also such as seems connatural to the *Species*: Thus we see in a Man, first he is a weak little Infant, then a Youth, then a Man, then he becomes an Old Man, and yet continues still a Man till his dissolution; and to these various states of his Age there seem to be various alterations accommodate; as difference in stature, bigness, strength, activity, understanding; and the same is observable in proportion to their capacities in Animals, Vegetables, Minerals, and the like. 3. That these alterations are necessarily successive and gradual, whether they be such as are preparative to Generation or Corruption of Beings, or such as consist with the Existence of the being they have (as those alterations incident to the state of things in their consistency) yet they are not instantaneous, but successive and gradual; nay those very alterations that are wrought in things by an external contrary Agent, yet they are not in a moment, but gradual and successive, which is partly by reason of the resistence in the Patient, and partly because the Agent works upon the Patient by a certain local motion of it self or parts, or of its virtue and activity, which cannot be instantaneous and *tota simul*, but gradual and successive: Thus the Sun reduceth the Clay to its final degree of hardness, and the Wax to its final degree of softness successively and gradually; the Fire assimulates the Stubble, and converts it into Fire, not in an instant but by degrees, though sooner or slower according to the vicinity of each, and the precedaneous preparations of congruity of the Stubble to be wrought upon by the Fire. 4. That these alterations that are thus successive and gradual, as they cannot be perfectly instantaneous, so it is impossible they can last or continue for an infinite or eternal duration. The reason is, because as they must have an inception of their motion, so they must of necessity arrive to their complement within the compass of time, and can never hold out in their progress to an infinite duration: Let us suppose the Fire and the Stubble to have been created eternally contiguous one to another, the Fire could never have held an infinite duration in consuming that Stubble, for then it could never have been consumed; for that which had been burning an infinite time could never be burnt, no not so much as any part of it; for if it had burned part after part, the whole must needs be absumed in a portion of time: neither need we labour this, for we see that the Fire consumes Stubble or other combustible matter in a short portion of time; and since if we talk of an Eternity of the World, or of any thing in it, we must in common reason suppose it to be such as now it is, we must necessarily allow the like properties, activities, natures and operations to things as we find them now have. And since we see that all bodily alterations are effected in certain portions of measured duration or time, we cannot upon any reasonable account allow to those alterations an infinite antecedent duration; but if any Body or Thing in that imaginary period of Eternity allotted to it had any such alterations as we see now are incident to them, they could not possibly be of an eternal duration no more than they are now, for that were wholly to alter the state of the World and of those things that are in it.

5. And

5. And consequently whatsoever thing it is that hath or can have an eternal being *à parte ante*, must persist in that eternal being without any change, alteration or corruption; or if it have any alteration or corruption, the first alteration, change or corruption that it can have, must be in time, and after an eternal, unchanged, unaltered estate precedaneous to such alteration; for if we should suppose it to be eternal, then of necessity that alteration or corruption which it hath, must be subsequent to that eternal state which it had before it was altered or corrupted, and consequently must have had a persistence in that unaltered, uncorrupted estate infinite Ages before such alteration or corruption: If it were eternally altered, or eternally corrupted, then it was eternally, and eternally was not; it was eternally without alteration, and eternally altered: The thing must be before it can be altered or corrupted, and consequently its alteration and corruption must be subsequent and after that existence which it had unaltered or uncorrupted; and consequently the alteration and corruption must needs be younger than that estate which it had unaltered or uncorrupted, and consequently cannot be eternal.

Again, we cannot by any means suppose that any commencement of alteration in the first moment or degree of it could be coeternal to it; for (as is before evident) then that alteration would of necessity be perfected within the like portion of time as the like alteration is perfected: Now suppose it were a corruptive alteration, it may be that is perfected in the space of three or six or months from its first inception, the consequence whereof would be, that the like alteration of that eternal alterable or corruptible Body, if it began with the thing it self, would be perfected in the like space, *viz.* six months: And should that perfected alteration fall within the compass of Eternity, or out of it? If it should, then the thing was eternally unaltered and uncorrupted, and was yet eternally altered or corrupted; was eternally, and yet that Eternity was but a space of six months, for so long only it had its being uncorrupted: If the alteration or corruption was not eternally perfected, but perfected in time, then an addition of six months the more of that alteration added unto a finite duration or time succeeding after such alteration, should make it infinite and eternal. 6. And yet the supposition of an eternal state of any corruptible or alterable Being, in a state of incorruption or unalteration, were utterly to change the very nature of things; and to give them an eternal state, we must be forced to gratifie them with a nature not only preter-natural to what they had, but quite of a distinct nature: For the purpose; That man that is even upon the intrinsick constitution of his nature dissolvible, must by being in an eternal duration continue immortal, unalterable, and not for a year, or a million or two of years, but for an eternal duration antecedent to his dissolution: Nay, it is inconceptible how any such man that hath stood the shock of an eternal duration without corruption or alteration, should after be corrupted or altered: from any internal principle of corruption or alteration it could not be, for then he could never have ridden out an eternal period; but it must be, if at all, by the power of a more powerful Being than himself, that must violently *de novo* introduce his change and dissolution. The Supposition therefore of an eternal existence of any thing corruptible, is to alter their very nature, and make that to be incor-

incorruptible which is corruptible. And to ſuppoſe that imaginary eternal ſtate of things corruptible, to be utterly of another nature, kind, and condition than what we now ſee them to be, which is an unreaſonable Suppoſition, unworthy of an admirer of Nature, which ſhould be conſtant in his Suppoſition, and yet is the neceſſary conſequence of the granting of an Eternity of corruptible Beings. But particular Inſtances of the ſeveral kinds of alterations and corruptions of things either *ab intrinſeco* or *ab extrinſeco*, will make the thing more plain.

1. Touching things alterable or corruptible from an intrinſecal Cauſe, as Vegetables, Animals, Men. If any Vegetables were eternal, as an Oak, or an Elm, then ſome Oak was eternal; if it were, then if it were of the ſame nature as Oaks are now, it was firſt a ſlender Plant, and then gradually grew to his juſt dimenſions, perhaps in two hundred years, and in about two hundred years more decayed, and was corrupted to duſt; ſo that his duration exceeded not four hundred years, and in that period of time he grew perchance from an inch in diameter to ſix foot in diameter, and from a foot high to a hundred foot high: Theſe alterations and augmentations were gradual and ſucceſſive; he was not in the ſame moment one inch and ſix foot in the diameter, nor in the ſame moment was a Plant and diſſolved and turned to duſt; and yet if this Oak were eternal in all this portion of his duration, he muſt be eternally one inch in diameter, and yet eternally ſix foot in diameter; eternally one foot high, and yet eternally a hundred foot high, he muſt have eternally been a Plant, eternally a Tree, and yet eternally corrupted; his duration muſt have laſted but four hundred years, and yet he muſt be eternal, though his firſt being were but four hundred years before utter diſſolution: And yet it is moſt certain that this Tree could not have been eternal; for being but of four hundred years ſtanding, ſomewhat muſt have anteceded that period, and ſo ſomewhat more ancient than what had been eternal.

But let us ſuppoſe this eternal Oak had not been bound to the laws of duration of other Oaks, but to have laſted eternally, and probably would have laſted to this day, had not external force either violently or accidentally corrupted or deſtroyed him; yet did this Oak ever grow bigger or taller than what he once was, or did he put off his leaves in the Winter, and gather others in the Spring? Did he put forth new branches, which before he had not? If he did none of theſe things, ſurely he was not a vegetable Being, he was not like thoſe Oaks that are now growing, but quite of another nature, and we have nothing to do with him, he is a perfect ſtranger to this World: If it did grow from leſſer to greater, and did put forth new branches, certainly the increment could not be eternal, but muſt be done gradually and ſucceſſively, and from one degree of bigneſs to another; and ſince that augmentation could never be of an infinite procedure, but being ſucceſſive, we muſt come to the beginning of that increaſe within the meaſure of ſuch a portion of time as we now find ſufficient for ſuch a production or increaſe, it may be two or three hundred years, which being but a finite duration can never be eternal: And this neceſſary Suppoſition of a ſucceſſive alteration or increaſe, utterly deſtroys the poſſibility of an eternal duration in any thing capable of ſuch alterations; 1. Becauſe it neceſſarily ſuppoſeth

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ſomewhat precedent to that ſtate wherein it is, namely, a precedent alteration of it, whereby it is now become what it now is, and what before it was not; ſo that it had ſomewhat before its preſent ſtate which ſtateth it to be what it now is, namely, that alteration or augmentation which ſo preceded its preſent ſtate, and conſequently that preſent ſtate wherein it is, could not be eternal, for it had ſomewhat before it. 2. Becauſe that very alteration that anteceded that ſtate which it hath cannot poſſibly be eternal, but muſt be perfected within a certain portion of time deſtined to it, and conſequently muſt have beginning within the compaſs of a determinate time, and cannot be eternally moving to its accompliſhment.

And as this Inſtance gives the impoſſibility of an eternal Exiſtence in any thing eſſentially alterable or corruptible, ſo it would be poſſibly more conſpicuous in the Contemplation of the Humane Nature: If we ſhould ſuppoſe a Man to have been eternal, Was that Man ever an *Embryo*, a Child, a Youth, a ripe Aged Man? Did he grow from a ſmaller ſtature to a greater, had he viciſſitudes of temperaments and diſtempers, did he eat, digeſt, *&c.* If he did not, then thoſe eternal Men were not of the ſame Make with the Men that are now, but quite another thing, which we know not what it was, or where to find it: But if he had all thoſe changes he could not be eternal, he ſhould be eternally a Child and eternally a Man, eternally young and eternally old, yea eternally living and yet eternally dead; for all theſe muſt fall within the compaſs of Eternity.

2. But let us now conſider how the Caſe falls out in relation to alterations and corruptions occaſioned *ab extrinſeco*, and we ſhall find, 1. That as the World is framed, and as thoſe that ſuppoſe it eternal, muſt ſuppoſe it to have been always ſo framed, there muſt neceſſarily be inceſſant mutations, alterations, generations, and corruptions by the invaſion and juxta-poſition of contrary Natures, Agents, Patients, Qualities, Motions; the Earth naturally dry is moiſtned by the vicinity of the Water, and again dryed by the heat of the Sun; the Earth obſtructs the fluidity of the Water by mingling its groſſer parts with it; all things as it were in continual motion and agitation, and mutual preying as it were one upon another; which as neceſſarily occaſioneth mutations, alterations, generations and corruptions, as the very intrinſecal diſſolubility of the natures of mixt Bodies. 2. And as we find this now, ſo we muſt ſuppoſe that this hath been always ſo ſince the World had a being; unleſs we ſhall ſuppoſe, as I have often ſaid, another kind of World than what we ſee: And although we are not acquainted with the ſtate of things out of, or beyond this ſublunary World, in which we ſee this viciſſitude of alterations; yet whether there may not be ſome ſuch mutations in the Ethereal World, we know not; but there may be ſuch, though we cannot certainly know them. 3. And yet it is moſt certain, that it is impoſſible that any thing that is capable of theſe mutations and changes can be eternally under them, but muſt of neceſſity, if it were eternal, conſiſt in ſuch a ſtate of fixedneſs and permanency that were not obnoxious to theſe changes. 4. And ſince it is not poſſible, for the inferior World at leaſt, to be *de facto* one moment of time without theſe changes and variations, alterations, generations and corruptions; which,

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as before, are not at all consistent with an eternal duration *à parte ante*, of that that is so subject to changes, we have just reason to deny and disesteem this imaginary Eternity can belong at least to the sublunary World. The late Author of a Book *De Ætate Mundi* hath given us an Instance herein, that if it would hold, we need not go farther; namely, That the great Rocks in the Sea are yet many of them eminently visible to this day, and yet daily experience shews us that those Rocks are gradually diminished by the beating of the Sea against them; which had they been so dealt with from Eternity, though they lost but one grain in a million of millions of years, they would not have been, but would have been consumed an indefinite time long since elapsed: But the Supposition fails, because it may be that these Rocks have at least vicissitudes of increase and diminution by the very alluvion of the Sea, or, which seems far more easily supposed, that the Earth and Seas might notwithstanding have been eternal, but yet the Sea might not have kept the same Channel where these Rocks now are, from eternity, but gained it in time; the Ancients telling us that the great *Atlantick* Sea was for the most part of it anciently a Continent, or at least a great Island as big as *Europe* and *Asia*, and after swallowed up and corroded into that vast Sea called the *Atlantick* Ocean, leaving behind it only those reliques now called the *Canary* Islands: I will therefore take my Instance in some other things.

1. It is evident that divers Minerals are bred in the Earth from an earthy consistence, by the heat of the Sun and other concurrent causes successively, as may appear to any man's observation touching Coals, Rocks, especially of Stone, which from a sandy kind of Earth gradually concoct into Free-stone, when they were before Earth, as may be seen in many Quarries by those pieces of unconcocted Earth not yet perfectly digested into Stone: If the Body of the Earth were eternal, either these concretions were also as eternal as the Earth gradually and successively digested into these concretions, or else the Earth must have had an eternal permanency in that state of simple natural Earth, without any such concretions or alterations in it: If we shall say the latter, we make the Earth another thing than what in truth it now is, which by the aid of the Sun hath these concretions and alterations even by a kind of necessity of Nature wrought in it: And besides, if in that portion of eternal duration wherein the Earth and Sun were in that very same natural state wherein they now are; the one active, piercing, and digestive by its heat; the other passive, receptive, and stored with materials for such a production. What should hinder but that there should be such production gradually and successively prepared, and at length generated by the conjunction of these active and passive Principles.

And yet if it be duly considered, supposing the Sun and the Earth to be both eternal, the Earth and its parts must of necessity persist in an eternal unchangeable state in that period of Eternity antecedent to the first alteration thereof to any such production: For if the production of these Minerals should be eternal, and consequently infinitely distant from us, the productions must be eternal, and yet there must necessarily antecede those productions a successive and gradual alteration of those parts of the Earth which were to be moulded in succession of time to Coals,

or Stone, or Minerals: And though perchance that alteration might take up a long preparation and diſpoſition, yet it could not be eternal, but muſt be abſolved, though in a long, yet in finite time; and conſequently the Earth, if eternal, muſt be before that preparation or alteration, and muſt have continued in an eternal ſtate, deſtitute of ſuch alteration or preparation, and in an eternal diſpoſition thereunto; which yet had been to ſuppoſe the Earth in that eternal period quite deſtitute of that mutation that upon the Suppoſition of the agency of the Sun had been connatural to it. So that upon the whole matter it ſeems plain, That neither ſucceſſive natural Beings, nor corporeal Beings, that are corruptible or neceſſarily ſubject to alteration, either from an intrinſick Principle or from an extrinſick natural Cauſe neceſſarily contiguous or approximate to it in ſituation or virtue, cannot be eternal; which will deprive the greateſt part of the ſublunary World at leaſt of that poſſibility, and muſt leave only ſuch parts of the viſible Univerſe as are incorruptible, unalterable, and unſucceſſive (if any ſuch be) capable of this priviledge of the very poſſibility of an eternal exiſtence *à parte ante*: And conſequently the whole Univerſe cannot be eternal.

It remains then, they who aſſert the Eternity of the World muſt content themſelves with ſuch parts thereof as are capable of that duration. And accordingly there ſeem to have been three Opinions, which although they aſſume not the Aſſertion of the Eternity of the whole World, yet they endeavour to come as near to it as they can; which I ſhall diſtinctly ſet down and examin.

1. The firſt Opinion is of ſuch, that although they ſuppoſe the ſublunary World not to be eternal in its Frame and Conſtitution, yet they aſſert the Matter thereof eternal, though undigeſted, and not perfected till afterwards: But yet the Celeſtial or Ethereal World, the Stars and Planets they will have eternal, and that theſe were uſed as the great Engins in the ſubſequent formation of the inferior or ſublunary World.

Touching the Eternity of Matter, whether Celeſtial or Sublunary, I mean not in this place to meddle; but as to the Suppoſition of the eternal exiſtence of the Celeſtial or Ethereal World, this ſhall be all I ſhall ſay: 1. We are not acquainted with the Conſtitution of them, and whether they are in their nature corruptible or ſubject to alterations; if they are ſuch, they are as equally uncapable of an eternal exiſtence as the ſublunary World. 2. But ſuppoſe them to have a radical incorruptibility and immutability in their natures, yet their Motion cannot be eternal upon the Reaſons before given. 3. And therefore though they are a goodly Fabrick, yet they are not in a ſtate of Permanency of ſo great uſe, beauty and perfection, as in a ſtate of Motion, which is a great part of their excellency, and that which accommodates the ſeveral parts thereof one to another, and all to the advantage and good of the inferior World; and therefore it ſeems not probable that they ſhould have an eternal exiſtence in Reſt and Permanence, and afterwards in a proceſs or period of time be endued with that which is their great perfection, namely their Motion, which neither was nor could be eternal: It rather ſeems more agreeable to the nature of the thing, and to the Divine Wiſdom, whoſe Works are full of wiſdom, excellence, and perfection, to reſpite the Fabrick till it were capable of its moſt uſeful and beautiful perfection, namely

namely Motion; which must either be natural to them, and then it were marvellous they should yet enjoy an infinite duration destitute of what was natural to them, and yet not capable to be enjoyed by them in an eternal duration *à parte ante:* Or if it were adventitious from the immediate power of God, or by the instrumentality of Intelligences, yet surely it was foreseen by him that knew all his Works from the beginning: and therefore was not likely to ordain an eternal consistence of those Bodies to which he intended to give Motion, their great perfection, not sooner than time: And therefore though the Heavenly Bodies were admitted capable of an eternal Permanency, yet it is not probable they had their Being before, or at least not so long before their Motion.

2. The second Opinion is of those that although they allow not the *Mundus aspectabilis* to be eternal, yet do suppose that besides that Eternal Generation of the Second, and the Eternal Procession of the Third Person of the Sacred Trinity, Almighty God eternally created a World of Intelligences, whereunto he might and did communicate the emanations of his Bounty and Benignity, and that in the beginning of Time he Created this *Mundus aspectabilis* which we see, for the farther communication of his Bounty and Goodness; and this they suppose more congenious and suitable to the Order of things, and of his own Goodness and the communication thereof, than to suppose the Creation of a material World either eternally or *quasi per saltum*, or at the same time with the Creation of those purer Beings, who had a greater similitude and proximity to his own most Divine and Spiritual Nature. This though it might possibly be so, yet we are without any sufficient Evidence that it was so, and such Conjectures of things without our knowledge, or those *media* that we are capable to exercise for the acquest thereof, are uncertain and endless: Upon such conjectural Congruities the *Platonists* had their *Dii ex Deo*, the *Manichees* their *Æones*, and *Origen* his *Mundus Animarum:* and therefore I leave it as a Conjecture.

3. The third Opinion is of those who though they suppose the World not to be eternal, and perchance think with reason enough that the duration of Eternity *à parte ante* is such as is only competible to the Eternal God, and not communicable to any Created Being, at least such as is in its own nature either corruptible, alterable, or compounded: yet to the end that they may carry the Communication of the Divine Goodness and Benignity as far as is possible, are not contented to suppose the World to be sempiternal or eternal *à parte post*, or to be as ancient as the Sacred Scriptures inform us, but will carry up the Creation of the World to an immense antiquity, long before Six Thousand years, and thereby they think they do at once salve the large Accounts which the *Babylonians* and *Egyptians* and *Chineses* give of the duration of their own Kingdoms and Histories, and also do, as they think, satisfie at least in a great measure that immense Benignity of the glorious God, whom they declare not only infinitely Good in himself, but necessitated by the perfection of his nature to comunicate his Goodness *ad ultimum posse* to things *ad extra*.

This Supposition of theirs seems to be grounded upon two matters

which are as I think miſtakes, or at leaſt do no way appear to be evidently true; namely, 1. That Almighty God, though he be by them admitted a free and intellectual Agent, is neceſſitated *ab extrinſeco* from the Perfection of his nature to do good *ad extra, ad ultimum poſſe*, which ſeems untrue. 2. And it ſeems likewiſe untrue, that if he were under that intrinſecal neceſſity, yet he were thereby bound to make the World ſooner than we ſuppoſe he made it: For as to the fabulous protractions of the age of the World by the *Egyptians* or others, they are uncertain idle Traditions, whereof they have no evidence but from the Impoſtures of their fabulous Prieſts.

Touching the firſt of theſe, namely, the Intrinſick Neceſſity of Almighty God to do good *ad extra, ad ultimum poſſe*, this is that Opinion upon which ſome have built their *Hypotheſis* of the Eternity of the World, and others, driven from that *Hypotheſis* by the abſurdities that accompany it, build their imagination though not of the Eternity, yet of a prodigious Antiquity of the World. But it ſeems to me, That although Almighty God being infinitely and eſſentially Good, is neceſſarily carried to will and delight in that his own infinite Goodneſs; yet in his acts of Benignity *ad extra* he is not neceſſitated by his own Perfection to act *ad ultimum poſſe*, but although his own Nature be Benign and Bountiful, the ſeaſons, degrees and meaſures, and other circumſtances of its Emanations are guided and directed by the freedom of his own Will.

And the reaſon thereof is evident, namely, Becauſe all the Good that is without, or that is poſſibly communicable by him to any thing without him, is finite, and cannot be infinite; and therefore he cannot be carried to it by an infinite deſire and intention, and yet ſuch it muſt be, if it be *ad ultimum poſſe*.

And if it ſhould be ſo, there would be infinite abſurdities follow which cannot be ſolved; as for inſtance, That either this preſent World muſt be actually of an infinite extenſion, or that there muſt be either infinite Worlds, or at leaſt as many Worlds as is poſſible to be by the power of Omnipotence. That he hath made ſome Beings of that perfection, that Omnipotence it ſelf cannot make them one grain perfecter, that they are but in the very next degree of perfection to himſelf, and cannot have the addition of one grain more to the excellence of their nature; that the Univerſe is ſo perfect, *omnibus numeris*, that it is not poſſible for Omnipotence it ſelf to add to it, no nor to alter it in one jot or tittle, either to make it better or worſe, or otherwiſe than it is; nay he cannot, *pro arbitrio* or dominion make one ſpire of Graſs, or one Fly, or one Worm more or leſs than he hath made, becauſe he hath made it as good as is poſſible to make it, and he is under the neceſſary obligation of his own indiſpenſable Perfection to make and keep it juſt as he hath made it: That the whole Ocean of Omnipotence and infinite Goodneſs is already exhauſted in the Work of the Univerſe, and hath nothing of good left that he can do more. Theſe are the conſequences of this Poſition, That the Divine Will is neceſſitated by the Perfection of his Nature to do good *ad ultimum poſſe*.

And as theſe abſurdities evince the untruth of the Aſſertion, ſo it is apparent in the very Frame of the Univerſe it ſelf and the integrals thereof, that

that it is untrue: For upon this Suppoſition admitted, there could not be a diſparity in the Natures of things, but every thing ſhould be conſtituted in that ſtate of being that might be capable of as much of the Divine Beneficence as it were poſſible for God to communicate. And if it be ſaid that this diſparity of things in their degrees of ſpecifical or individual perfection contributes to the beauty and convenience of the Univerſe, which is the primary Object of the Divine Beneficence, this ſalves not the Objection; becauſe it is poſſible that many things might have a greater meaſure of ſpecifical Perfection with great advantage to themſelves and to the Univerſe alſo. But ſuppoſe this inequality of degrees of ſpecifical or individual Perfection might nevertheleſs contribute to the advantage of the Univerſe conſidered collectively, yet do we not ſee that daily there are many deficiencies even in individuals, which might have been ſupplied with exceeding benefit to themſelves, and with advantage to the Univerſe? Are there not among men ſome that want the integrity of their Limbs, ſome that want their Senſes, Memories, Underſtandings; ſome that are extremely vicious, and unjuſt, and degenerate even from the common Principles of Humanity, many that are diſeaſed and infirm, many good men of ſhort and difficult lives; and might not all theſe have the integrity of their Bodies and Minds proportionate to the perfection of their ſpecifical Nature; be virtuous, ſound, long-lived, with advantage to themſelves and mankind, and yet without detriment to the Univerſe? And therefore ſurely ſuch they would have been, if the glorious God were neceſſitated to be Beneficent *ad ultimum poſſe*, unleſs we ſhould preſumptuouſly aſſert an impotence in him to rectifie theſe things.

2. But if we ſhould ſuppoſe this to be true concerning the Divine Obligation or Neceſſity, let us now examin what the making of the World a million of years elder than it, is would do in the buſineſs.

1. It is true, though we ſay the World is not, cannot be eternal *à parte ante*, yet it is certain that either upon the nature of the thing or the part of the Almighty and the abſolute power of God, without relation to the determination of his Will, there can be no determinate moment, or *tempus ſignatum imaginarium*, within the bounds or limits (if I may ſo ſpeak) of antecedent infinite duration, but God might have made it ſooner than he made it; and if a year ſooner than he made it, he might have made it a thouſand years ſooner than that.

2. Conſequently, if the World be not eternal, it is impoſſible to aſſign any time for its making it which anſwered the *ultimum poſſe* of Almighty God for the making it; and therefore if we ſhould ſuppoſe the World to have been made as many millions of years before it was made, as there have been minutes ſince it was made, it could not anſwer the *ultimum poſſe* of Almighty God, nor anſwer that imaginary Obligation or Neceſſity of his nature to do good *ad ultimum poſſe*, for ſtill it might have been made before any *hora ſignata*.

3. Conſequently the time of the Creation of the World, if it were on this ſide an eternal period, could neither be determined by his want of Power, nor by his neceſſitated Benignity *agere ad ultimum poſſe*, for in that indefinite time within the limits of Eternity no time can be aſſigned before which he could not have made the World, though it be admitted it could not be eternal.

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4. Consequently there could be nothing that could determin the time or period wherein the World was to have been made, but the absolute *Divinum beneplacitum*; there could be nothing without him to determin it, for nothing was till he made it, nor any thing but his own Will within him that could determin it: for his power and goodness were undetermined to do it sooner or later, since no time could be assigned for the doing of it but it might be done sooner.

And when all is done, his Beneficence, nor the good which the created Beings might receive from that Beneficence, had had no imaginable advance or enlargement, if the World had been created millions of millions of years before it was; and that upon these plain evident Reasons.

1. Because though the World had indeed been at this hour ancienter, and lasted longer, if it had been created a million of years sooner, yet the future Eternity or Sempiternity of the World being of all hands admitted, though the Eternity *à parte ante* be denied, there will be a future infinity for the emanation of the Divine Goodness and Beneficence to his Creatures.

2. Considering the nature of the Beings themselves that partake of the Divine Beneficence, there is no advance at all to them by receiving it sooner or later: If *Plato* had been a million of years before he in truth was, and had lived his proportion of eighty years, he had tasted no more of the Divine Beneficence than if he had lived as he did about two thousand years since.

3. Neither is there any difference in respect of the ever-glorious God, for he received no access of happiness by the Creation of the World, nor stood at all in need of it: And if he might be imagined to have received any contentment in it, yet he had an eternal prospect of all things as if they had been really made eternally: And besides, if the World had been myriads of millions of years sooner than it was, yet it was still infinitely short of an eternal duration; Almighty God had been an infinite duration before without that World, which had it been made millions of years before it was, yet had not held any proportion to that infinite duration that preceded.

And whatsoever hath been formerly said against the Eternity of this World doth equally conclude against an eternal being of any World antecedent to this, much more against an eternal succession of infinite Worlds, either of which can have no certainty, nor have any evidence or probability; so that as there cannot be attributed an eternal duration *à parte ante* to any one such supposed pre-existing World, so much less to a succession of Worlds.

The very same Arguments that conclude against the possibility of eternal Motion, or the eternal successions of Generation and Corruption, or of successive Individuals of Mankind do as effectually conclude against an eternal succession of infinite Worlds, and therefore I shall spare the repetition of them.

The Arguments which I have before used are such, as though at the first view they seem intricate, yet they have strength of evidence in them, and such as are accommodate to the nature of the thing which requires Arguments of such a nature; and those Arguments that are more

more experimental and obvious to ſenſe, though they are more eaſie to be apprehended, yet are more eaſie to be evaded by the Aſſertors of the Eternity of the World.

In the before-mentioned Book *De Ætate Mundi* two experimental Arguments are brought againſt the Eternity of the World, upon which the Author lays ſome weight.

1. That if the World were eternal, by the continual fall and wearing of Waters all the protuberances of the Earth would infinite Ages ſince have been levelled, and the Superficies of the Earth rendred plain, no Mountains, no Vallies, no inequalities would be therein, but the Superficies thereof would have been as level as the Superficies of the Water.

2. That if this World had been eternal there would have been no Rocks appearing in the Seas above the Water, whereof there are very many viſible; for the motion and agitation of the Water doth wear and eat off gradually the roots and other parts thereof, as is viſible to our obſervation; ſome whereof have their roots ſo corroded by the Water, that they are ready to fall, and others have apparently by that means been either waſted or decayed, that now they are not extant which in ſome mens memory have been ſtanding; and if the bredth of a Barley-corn had been conſumed in a million of years, there had been nothing of them left.

That theſe things are true in fact, and that the reaſon why many of theſe effects are apparent to us to be as they are, is becauſe that theſe Rocks and theſe Protuberances have not been eternal, may be well attributed to that *novitas eſſendi*, that finite period wherein they have continued, is very probable and evident to him that is ſatisfied otherwiſe, that the World had a beginning, I eaſily grant: But he that aſſerts the Eternity of the World will find out eaſie evaſions of theſe ſenſible Arguments: They will tell us, and with truth enough, that in a great tract even of a finite duration the Earth muſt have and hath had great mutations: That by the eruption of Bituminous and Sulphureous Vapours, and the firing thereof, theſe protuberances of Mountains and Hills may be made, and have been made in many parts: That as Warts or Wenns growing in our Hands are thruſt up by the humors miniſtred by the extremity of the orifice of ſome Capillary Vein, and increaſe; ſo in the great Body of the Earth ſuch protuberances may be thruſt out and gradually increaſed, though not ſo eaſily perceptible in one Age, and by this means there may be a continued ſupply of what is ſucceſſively abraded from them by decurſion of Waters: That Matter is never loſt or annihilated: That what is decayed by that decurſion of Waters is in ſome meaſure ſupplied by the terrene *faces* which that Water brings with it: That by continued viciſſitudes the Earth is repaired by the inſenſible deſcent of Atoms of Matter raiſed in others places, the Atmoſphere being evermore filled with little particles and concretes of Matter which are unceſſantly diſcharged upon the Earth, and as unceſſantly again ſupplied in the Air by the more groſs and terreſtrial parts of thoſe Vapours that are raiſed principally from the Sea and watriſh places, by means whereof the Water juſtly pays in proceſs of time what is borrowed from the Earth by a perpetual circulation. And that hence it comes to paſs that in proceſs of time,

time, even to our view, Channels that were deep and broad, yet by a little time of dryneſs grow narrow and ſhallow; that thoſe Mountains, whoſe chief ſubſtance is Rock, become cloathed with a ſuperficial Mantle of Earth and Mould; that thoſe places, which were formerly filled with Wood, have buried the fallen Trees three, four, or five foot deep in the ground, by an accretion or cover of Earth, derived to them ſometimes by Alluvions or Floods, ſometimes and moſt ordinarily by the deſcent of thoſe Terreſtrial Particles, that are drawn up together with watry Vapours, and either together with thoſe Waters, or after arefaction thereof in the Air, diſcharged upon the Earth, which doth *reparare deperditum.*

And as to thoſe Rocks in the Sea, they will alſo tell us, that the viciſſitudes of the Sea and Land in a long proceſs of time, much more in an eternal duration, are very many and various: Sometimes that becomes Land which was once Sea, as appears in that part of *Egypt* thorough which *Nilus* runs, long ſince obſerved by *Ariſtotle*, and before him by *Herodotus*; and even in our memory great quantities of Land are now firm and habitable, where Ships anciently rode; and on the other ſide many parts are become Sea, which were once firm Land: They inſtance in that traditional vaſt Iſland in the *Atlantick Ocean*, which is drowned, and hath left no Remains of it ſelf, but thoſe Iſlands called the *Canary Iſlands*; but whether that tradition be true or not, it is very probable, that by particular Inundations the Face and State of the Terreſtrial Globe, by great viciſſitudes, is much changed. And therefore though they ſuppoſe the Terreſtrial Globe Eternal, yet the Earth and Water hath not eternally kept the ſame poſition or ſite that now it hath: And therefore the Sea, ſo often (at leaſt in an Eternal Period) ſhifting its Channel, hath not eternally waſhed the ſame Rocks that now it doth, but after an indeterminate and vaſt uncertain Period, it may be of ten or twenty thouſand years, leaves that Channel which before it had, and gives thoſe Rocks that it waſted opportunity to recruit again, and then perchance after a like vaſt Period of Time viſits the ſame Channel again; and therefore though the World might be Eternal, the alluvion of the Sea upon thoſe Rocks might not be eternally continued, but interpolated. And though the Earth be not animated with a Senſible Soul, yet it is poſſible that it may be a great Immortal Vegetable, which may reproduce or increaſe Rocks or Mountains in various viciſſitudes of vaſt Periods of Duration. And this they think very probably to be collected by the obſervation of things, and yet if it be not to be proved to be thus, yet thus poſſibly it may be, which is ſufficient to elude the force of thoſe ſenſible Arguments.

And the truth is, theſe Solutions do evade the edge and concludency of thoſe Phyſical Arguments, and therefore much weight is not be laid upon them, but upon thoſe of another nature, whereof in the foregoing part of this Chapter.

And there is no way to encounter the Solutions that theſe Men do, or may give of theſe two laſt Arguments, but to have recourſe to what hath been before ſaid, namely, that ſince the Solutions are grounded upon a Suppoſition of Eternal ſucceſſive Motions, whereby by viciſſitudes of long uncertain Periods of the Decays and Reparations of the inferior World,

World, and by eternal viciſſitudes of the tranſlation of the Earth and Seas to ſeveral ſites either by interpolated, or ſucceſſive Motions. And ſince by what hath been before proved, there is an utter impoſſibility in Reaſon and Nature of any Eternity *à parte ante* of continued or interpolated Motion, there is likewiſe an impoſſibility in Nature that there ſhould be this eternal viciſſitude of decays and repairs of the Earth, or ſhifting of ſtations between the Earth and the Sea. And thus we are at laſt driven to reſort to thoſe though more obſcure yet more concludent Arguments againſt the Eternity of the World which are mentioned in the beginning of this Chapter, or ſuch as are of the like nature, ſome whereof will be hereafter farther conſidered.

Averroes, who was a ſtrong Aſſertor of the Eternity of the World, inſiſteth upon a Reaſon which is witty, but upon a miſtake of the nature of eternal duration, *viz.* That if the World were not eternal, but created in ſome certain *Epocha* or Period, it could never have been at all, becauſe an eternal duration muſt neceſſarily have anteceded the firſt production of the World; and that Suppoſition excludeth the poſſibility of ſuch its production, and is contradictory to that ſuppoſed *novitas eſſendi* of the World; for, *infinitum non poteſt pertranſiri*, an infinite duration pre-exiſting to the Worlds production could never be paſſed through, ſo no poſſible acceſſion to the firſt exiſtence of the World through the vaſt compaſs of a pre-exiſting infinite duration.

But this reaſoning of his is inſufficient, becauſe it takes in but a portion of Eternity which is *à parte ante*, whereas that Maxim is to be applied to the full and entire compaſs of Eternity or Infinitude. For if that Argument ſhould hold, neither *Averroes* nor *Plato*, nor any man elſe could have been born in the World, but muſt have had an eternal exiſtence upon the very ſame reaſon that *Infinitum non poteſt pertranſiri*; for it is certain that as well an infinite duration anteceded the Birth of *Plato* or *Averroes*, as it muſt do the production of the World if admitted to have *novitas eſſendi*.

And thus much touching this preparatory Diſquiſition concerning the Eternity of the World in general.

CAP. IV.

Concerning the Origination of Mankind; and whether the ſame were Eternal, or had a Beginning.

IF the World it ſelf were not eternal, this Diſquiſition touching the Eternity of Mankind were needleſs, becauſe decided in that deciſion.

Therefore our Inquiry touching the Origination of Mankind, and whether it had or had not a Beginning, is in this place by way of Suppoſition or Admiſſion, namely, Whether admitting the great Integrals at leaſt of the Univerſe, the Heavens and Heavenly Bodies, the Elementary World were or at leaſt might be eternal; whether yet Mankind

were, or might be eternal? And the Queſtion poſſibly will be much of the ſame kind, with relation to other at leaſt perfect Animals and Vegetables, yea and all mixed or compound Bodies; for we ſhall eaſily find, that admitting thoſe greater Integrals of the World were eternal, yet whatſoever is ſaid againſt the Eternity of Mankind will bear as hard againſt the Eternity of perfect Animals, and almoſt of all compound Bodies.

And although for the more orderly diſcuſſion of this Enquiry concerning the Original of Mankind, I muſt *gratia argumenti*, and according to the Method propoſed, admit the Eternity of the great Integrals of the World; yet it will appear upon a due examination to be ſuch an Admiſſion as muſt in a great meaſure be contradicted in the debate of what is propounded to be proved, and the particular Reaſons againſt the Eternity of the Humane, Animal, or compounded Bodies will neceſſarily infer an impoſſibility, or intollerable abſurdity in the thing admitted. For inſtance:

To ſuppoſe an eternal exiſtence of the Heavenly Bodies and of the Elementary Bodies in the ſite and poſition in which they are, and to ſuppoſe them in an eternal reſt and unactivity, and without motion, action, paſſion, or perfection of the leſs noble by the more noble, were to ſuppoſe them eternally kept in a uſeleſs, needleſs, imperfect ſtate, for an immenſe, eternal duration, till the firſt moment of their being put into Motion.

Again, to ſuppoſe the Heavenly Bodies and their Motions and Influence, the Fiery Nature diſperſed through all the Sublunary World, with its activity and motion; and the Paſſive Nature of the more paſſive Elements to have been eternally in the World, and in all that eternal duration not to have produced mixed and compound Bodies in that eternal duration until ſuch a determinate point of it, were a thing ſtrangely repugnant in Nature, unleſs Almighty God were pleaſed to uphold their being, and yet ſuſpend their activity for an immenſe eternal period.

And yet to ſuppoſe that the compoſition of Bodies out of the Elements (by virtue of the activity and influx of Motion, out of Matter that muſt by that influx be prepared for compoſition) ſhould be as ancient as thoſe Heavens, or that Motion, that Fiery active Principle that muſt compound them out of thoſe ſimpler Bodies out of which they muſt be compounded (as all this muſt be, if they are eternal) is as impoſſible as any thing that can be thought of.

Again, if we ſhould reſolve the Eternity of the World into the Divine Will, which being neceſſitated by his goodneſs to do all the good he can, even *ad ultimum poſſe*, and upon that account made the World eternal, it were a ſtrange Suppoſition to imagin that this God ſhould give the great Integrals of the World an eternal being in eternal reſt, without Motion, which is their perfection; or if together with Beings he gave or indeed could give an eternal Motion, it were a ſtrange Suppoſition that he ſhould ſuſpend the efficacy of that Motion or Activity of the active Principles upon the paſſive (which both exiſted) for an infinite ſpace, and then after took off that ſuſpenſion: And yet farther, Suppoſe Almighty God did or could give an eternal being to thoſe Active or Paſſive Natures, and an eternal production of all mixed Bodies for an

an eternal duration but only Mankind (that is the nobleſt of all ſublunary Natures, and apparently the glory of the ſublunary World, and the very end of much of what is produced) I ſay, it is ſtrange that the inferior World ſhould be moved, agitated, and mingled into various mixed Bodies, and thus continue during the immenſity of an eternal duration without Mankind in the World, if Almighty God were neceſſitated by the Benignity of his nature to do the uttermoſt good he could; and if he could produce Man eternally, there was an equal neceſſity for him to do it as to produce a Tree or a Stone eternally.

All this tends but to this, That if in the debate of this matter we can find that Man either could not be, or was not eternally produced, we have the ſame reaſon to believe that no compound Nature was produced eternally, that no local Motion or corporeal Action was or could be from Eternity; and conſequently, that the Heavenly or Elementary Bodies were not from Eternity: The very ſingle clearing of this one thing, that Man was not eternal, breaks the whole *Hypotheſis* of the Eternity of the World, cuts aſunder all the connexion of evidence that is for it, renders the moſt conſiderable perfection of the World, its Motion, Action, and Operation impoſſible to be eternal, and the exiſtence of the Bulk, Poſition, and Fabrick thereof (unuſeful, imperfect, and deficient without its Motion, Activity, and Operations) improbable to be eternal. So that the Poſition which I endeavour to prove, namely, the Non-eternity of Mankind, doth in truth deſtroy the Suppoſition of the Eternity at leaſt of the inferior World. But this I only ſubjoyn by the way.

Concerning the Origination of Mankind, *Cenſorinus* in his golden Book *de Die Natali*, *cap.* 4. gives us the ſhort ſtate of the Queſtion, and the ſeveral Authors that hold either way; *viz.* *Alii, ſemper homines fuiſſe, nec unquam niſi ex hominibus natos, atque eorum generi caput exordiumque nullum extitiſſe; alii, fuiſſe tempus cum homines non eſſent, & his ortum aliquando principiumque natura tributum.* Of the former Opinion he reckons *Pythagoras Samius*, *Ocellus Lucanus*, *Archytas Tarentinus*, *Ariſtotle*, *Theophraſtus*, *Plato*, *Xenocrates*, *Dicæarchus*, and others.

But for the more clear ſtating of the Inquiry, I ſhall reſume ſomewhat which hath been before ſaid touching the Queſtion before-going of the Eternity of the World, and ſome other things I ſhall add thereunto.

Firſt, it is to be obſerved, that the Queſtion is not here, Whether the ſucceſſive Individuals of Mankind may or ſhall be eternal *à parte poſt*, perpetuated to everlaſting by ſucceſſive generation. For although whether that ſhall be or no, depends upon the Divine *Beneplacitum*, yet there is no intrinſecal repugnance *ex parte rei*, but that as the World, and the Generations of Men in it have been thus long continued by the communication of the Divine Influence and Providence, ſo both the one and the other by the ſame Influence and Providence may be continued without end: And the reaſon is, becauſe ſuch a duration, and ſuch a ſucceſſive multiplication of Individuals imports only a potential infinitude, and ſuch as never ſhall nor can be completed into an actual infinitude of duration or number: So that as Number is potentially infinite by addition of new parts to it, which yet never ſhall nor can ariſe to a number actually infinite, becauſe after every period thereof there ſtill may be a farther acceſſion of a farther period, yet it never will nor can be actually

infinite, becauſe ſtill there will or may be farther additional periods of duration to that which went before.

The Queſtion therefore reſts only as to that part of the imaginary Line of the duration of ſucceſſive Individuals that anteceded any given moment; or, Whether Mankind had any beginning of being, or were eternal or without beginning.

And touching this, there have been ſome that have affirmed Mankind to be without beginning or eternal; others that have affirmed that Mankind had a beginning.

Touching the latter of theſe, and the various Conjectures touching the manner of it, I ſhall write hereafter; at preſent I ſhall conſider and examin the former.

Again, of thoſe that have affirmed Mankind to be without beginning, and that maintain not only the Eternity of the reſt of the World, but alſo of Mankind; they are of two ſorts, *viz.* 1. Such as have affirmed that the ſucceſſive Generations of Men have been eternal, not only without any beginning, but without any firſt Parents of Mankind, and that they have been always *geniti ex genitis.* 2. Thoſe that have ſuppoſed that there were ſome firſt Parents of Mankind, which by a natural and univocal generation multiplied their *Species*, but yet that thoſe firſt Parents of Mankind were eternal Individuals, having an eternal exiſtence in their individual nature, and in relation to them the reſt of Mankind were *geniti ex non genitis.*

As to the former of theſe Opinions, they ſeem to be divided into theſe enſuing Parties or Opinions.

1. Such as think the ſucceſſive Generations of Men were eternally ſo, and independent upon any Efficient, and neceſſarily by the eternal eſtabliſhed courſe of Nature independent upon Almighty God, or any firſt Efficient of the *Species.*

2. Such as think the ſucceſſive Generations of Men were eternally ſo, but dependently upon Almighty God, yet as a neceſſary Effect produced by Almighty God as a neceſſary or natural Cauſe, as the Light is a coexiſtent Effect of the Sun.

3. Such as think the ſucceſſive Generations of Men were eternally ſo, but dependently upon God as an efficient voluntary Cauſe of them by eternal Creation, yet ſuppoſe that Will intrinſecally determined to ſuch an eternal Creation of Mankind by the indiſpenſable benignity and goodneſs of his nature.

4. Such as though they take Almighty God to be under neither of the former neceſſities, but an Agent purely voluntary, and determining his own Will by it ſelf only, and that deny the eternal ſucceſſions of humane Generations as to the fact; but yet affirm it poſſible that Almighty God might, if he pleaſed, have created the World and Mankind eternally.

Having thus ſtated the Opinions of the Aſſertors of the Eternity or Beginning of Humane Generations, I ſhall purſue this Method; 1. In this Chapter I ſhall conſider the poſſibility or impoſſibility of eternal Generations of Mankind, with relation to the four preceding Suppoſitions that aſſert it. 2. In the next Chapter I ſhall conſider the poſſibility or impoſſibility of any one Man or Woman eternally exiſting, from whom Mankind

Mankind had their production by univocal generation. 3. I shall afterwards consider of those evidences of fact and probability, that *de facto* may seem to prove that Mankind had their beginning in time, and the Objections against it. 4. I shall then descend to the Consideration of the various Suppositions of those that have supposed a temporary Origination of Mankind.

At the present therefore I shall propound those Reasons that to me seem concludent, that although it might for Arguments sake be supposed that some parts of universal Nature, namely, such as are permanent and fixed, and not *in fluxu*, might be eternal; yet it is simply impossible that the Generations of Mankind can be eternal in any of the four foregoing ways.

And before I come to give my Reasons, I shall premise two things.

1. In relation to the four foregoing Opinions, there seems to be this implyed in them: 1. The two former do most clearly take up the entire collection of Mankind and the Generations of them to be a meer natural Effect or Work, with this odds, that the former acknowledgeth no Efficient at all; the latter acknowledgeth God the Efficient or first Cause of the eternal World and the Generations of Mankind as a natural Cause: And consequently they must needs hold, that as Man is now generated, so he was eternally so; and as he is now, so he always hath been; and the measure that we take of him now will fit to all those innumerable Men that have been within the vast compass of Eternity: As Man is now a compound Body of the four Elements, so he always was; as he is now nine Months *in utero matris*, such was the method and the *mora* of every Man's production; for the Effect is a natural uniform Effect, whether independent upon God as the Efficient thereof, or dependent upon Him as a Natural Effect. And therefore whatsoever is impossible to be attributed to *Peter*, or *John*, or any other individual Man, is incompetible to every Man in all this infinite Collection within the unlimited extent of Eternity.

But the two latter, though both suppose an eternity of Generations, and though in Eternity there cannot be supposed well a first, yet do what they can, if they suppose a production of Man by eternal Creation, they cannot deliver themselves from these consequences; 1. That there must be some Man or Men that had his or their beginning in some other way then other persons had it, namely by Creation; for although Creation be an instantaneous act of the Divine Will and Power, it must of necessity be terminated in some individual determinate Person, and it cannot be *quid vagum*; the consequence whereof must necessarily be, That if there were an eternal Creation of any Man or Men, they that were thus created had their production (if we may suppose such a production) by a different way from the production of those that had their being by generation; and herein this Supposition of the Origination of Humane Nature differs from the two former Suppositions. 2. And consequently, that if the Creation of Man and of the rest of the World must be in the same point, as I may call it, of Eternity, the rest of the World or any part thereof could not be precedent to the Creation of Man, for then they have lost what they contend for, namely, an eternal Creation of Man: If it were but one imaginable moment after, then the

World

World might indeed have had an eternal exiſtence, but it would be impoſſible for Man to have had that eternal exiſtence by Creation, unleſs in the ſame firſt imaginary conceptible moment of Eternity (an expreſſion improper enough I confeſs) Man and the reſt of the World were concreated: The conſequence whereof, as I before ſaid, is, that thoſe Men muſt not as the former ſuppoſe all Individuals of Mankind had the ſame natural manner of production, for among the whole Collection ſome one or more had a ſupernatural manner of production, namely, by Creation.

2. This being premiſed concerning the different ſtates of the two former and two latter Opinions, ſomewhat I ſhall ſay in general touching the Reaſons I uſe againſt all theſe Suppoſitions: 1. In general, That that kind of reaſoning which reduceth the oppoſite Concluſion to ſomething that is apparently impoſſible or abſurd, is as much a Demonſtration in diſaffirmance of any thing that is affirmed as can poſſibly be in any caſe, if the Concluſion of the affirming party doth neceſſarily inferr an impoſſibility or abſurdity in the nature of the thing affirmed, it is a Demonſtration, *Argumentum cum contradictione concluſionis*; and ſuch will thoſe be which I ſhall bring. 2. Becauſe the former Suppoſitions touching the Eternity of Mankind, though they conclude in the ſame Aſſertion, yet becauſe they do it by ſeveral Suppoſitions, the Arguments that I ſhall uſe ſhall be of three natures; 1. Such as oppoſe in ſpecial the two firſt Aſſertions: 2. Such as eſpecially oppoſe the two laſt: 3. Such as in common oppoſe both.

1. The Argument that I uſe againſt the two firſt Suppoſitions is this, That it is evident to Experience and the Conceſſions of thoſe very men, that the Body of a Man and all other compounded Bodies conſiſt not only of Matter antecedent to their Compoſition, but alſo of ſuch a Matter as is digeſted from thoſe more ſimple Bodies which we call the four Elements, Fire, Air, Water, and Earth: And therefore of neceſſity, and according to the Principles of theſe very men, before the exiſtence of any compounded Body there muſt be of neceſſity, 1. A pre-exiſtence of thoſe ſimple Bodies out of which this compounded or mixed Body is compounded: 2. A pre-exiſtence of thoſe more active Principles in Nature that are neceſſarily pre-requiſite to the mixing of theſe particles of Elementary Bodies, and to the diſpoſition of them to the Union and Conſtitution of that mixed Body whereinto it is to be formed, namely, the Motions and Influx of the Heavens, the Activity of the fiery Nature, ſubduing the more paſſive parts of Matter to the ſuſception of that Form wherein it is to be brought. 3. A *mora*, or due ſpace of time intervening between the firſt coagulation of Matter and the firſt inſtant of the diſpoſing thereof, and the complement thereof in its determinate *Species*, which according to the degree of its ſpecifical perfection is ſometimes longer, and ſometimes ſhorter; as the Statuary ſtrikes more ſtrokes upon that piece of Marble that is completed into the Statue of *Cæſar* than into the Cube or Pedeſtal whereon he ſtands: all theſe muſt precede, not only in nature, but in time, before the complement of any compounded Body in its ſpecifical conſtitution. And therefore ſince all mixed Bodies require neceſſarily the antecedence of theſe ſimple Bodies, this action of the more active Principles, this *mora* in the full diſpoſition and digeſtion

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of them into their complement of a mixed Being, it is ſimply neceſſary that there muſt be a poſteriority in time of every compounded Body, eſpecially the Body of Man, to theſe more ſimple Bodies out of which it is conſtituted, and thoſe ſucceſſive and gradual actions, and of the more active Nature by which it is diſpoſed and completed in its being: And if once we admit a priority and poſteriority, it is impoſſible the latter can be eternal, becauſe it hath neceſſarily ſomething that actually preceded it.

2. The Argument againſt the Eternity of Mankind upon the two latter Suppoſitions is thus; If Man were eternally created, or con-created with the reſt of the World, it is of abſolute neceſſity that that Creation muſt be terminated in that individual Perſon that was thus created. For whether Creation be eternal or not eternal, it muſt neceſſarily be terminated in ſome individual Being that is ſo created. And it is neceſſary alſo that that created Perſon were created in ſome determinate ſtate, and in a ſtate anſwerable to the nature of theſe Men that we now ſee; and though his Life were longer than ours, yet it would be certain that he lived as we do, one day, one month, one year after another, and that thoſe firſt created Perſons did generate their kind by the conjunction of Sexes, as is done in the World. And therefore if both Sexes were created, yet ſooner or later they propagated their kind, as is now done; for though they themſelves had a differing manner of production from thoſe that ſucceeded them, we muſt conceive that their Conſtitution was the ſame, otherwiſe we ſhall not ſo much ſuppoſe an eternal Creation of Man, as of ſomething elſe of a nature eſſentially differing from Man; which is contrary to the *Hypotheſis* it ſelf: And if this be ſuppoſed, we ſhall never deliver our ſelves from intollerable difficulties and abſurdities. For, 1. There would of a neceſſity be a firſt Man, which cannot be conſiſtent with the attribution of Eternity to Mankind. Again, 2. That firſt Man, if created eternally, muſt needs be diſtant from us by a leſs portion of duration after he had lived a year or two; and conſequently the duration from his age of two years could not be eternal, for it is ſhort of the period of his Creation by two years, and therefore not eternal; neither could his Creation be eternal, for then the adding of two years to a duration leſs than infinite ſhould make it infinite, which is abſurd and impoſſible. Again, 3. Was the generation of the firſt born Man at an infinite diſtance from us, and eternal, or no? If it were, then it muſt be of the ſame antiquity with the Creation of the firſt Man; and ſo the firſt born Man was eternal, and was conſequently before he was born; and his Eternity ſhould be ten, twenty, thirty, or forty years ſhort of the Eternity of his Father, yet both eternal: If the Birth of that Man were not eternal, then conſequently the Generations of Mankind are neither infinite nor eternal; nay conſequently the Creation of the firſt Man could not be eternal nor an infinite diſtance from us, for there muſt neceſſarily be a determinate Period between the Creation of the firſt Man and the Birth of the ſecond, and that time muſt neceſſarily be finite; and the addition of a finite duration to a finite duration can never make an infinite duration.

Eternity therefore, and a duration actually infinite, cannot be applied to ſucceſſive Beings: The abſurdities and incongruities that ariſe upon ſuch an application are infinite and uncurable, and not to be attempted:

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Nothing but an infinite and indiviſible Being is able to ſuſtain an infinite and eternal duration, it will never fit other things, it is too great for them.

3. I now come to conſider thoſe Reaſons that are applicable indifferently to all the former four Suppoſitions, and render them all alike vain, abſurd, and impoſſible. I ſhall reſume ſome of thoſe that I uſed before againſt the Suppoſition of the World's Eternity, and I ſhall ſubjoyn ſome others more particularly applicable to the condition of Man.

1. If the ſucceſſive Generations of Mankind were eternal, then of neceſſity ſome one Man among them that preceded us was infinitely diſtant from us that are now living in point of duration, and infinite numbers of Men have intervened between us and him; this is plain and undeniable.

If ſo then, if this Man lived to the ordinary age of man, for the purpoſe, till thirty years old, and then had a Son, and after this he lived to ſeventy years old, and died: Was this Son of his diſtant from us an infinite duration, an infinite period of years; or were there infinite Perſons that intervened between this Son and us his remote deſcendants or no? If there were, then the duration from his Father, which was thirty years before his Son, muſt be thirty years greater than the duration of the Son, and yet the Son as eternally exiſting as his Father: if not, then thirty years added to the finite duration from the Son to us muſt make it infinite. There were infinite Perſons in the interval between us and his Father, and but finite between us and his Son, and yet the odds between both muſt be but one. The Father's Death muſt be eternally diſtant from us as well as his Birth, and yet his birth ſeventy years before his death.

2. I ſhall here alſo reſume the Argument above-given againſt the Eternity of Motion (which yet is no other but a different kind of application of the Argument laſt mentioned.) Whatſoever is now paſt and gone, was moſt certainly once preſent; therefore the moſt remotely diſtant Man in that vaſt Period of Eternity was certainly once actually exiſting, and though he be now paſt, yet thoſe Attributes and Conceptions that were applicable and affirmable of him when preſent, are now affirmable and applicable to him though paſt, (abating only the relations of paſt and preſent,) if when he was preſent and actually exiſting he could not be eternal, ſo neither can the addition of all the ſucceeding myriads of Men by ſucceſſive procreation make any one day of that Man's age to be infinitely diſtant from us, for it could not be ſo when he was preſent and exiſting. That Man whereof we ſpeak was ſuch a Man as we are, lived ſucceſſively as we do, and though poſſibly he might be longer-lived than us, yet his age was meaſured by days and years as ours is, and could never be without beginning; and conſequently this Man, when exiſting, was the *Radix* of all that ſucceeded him, the *terminus claudens* of all his ſucceeding Generations, which bounds and terminates *à parte ante* all the ſucceeding Generations; as that Man when preſent was not eternal, ſo neither can the addition of ſucceſſive Generations produce a Line of duration of infinite extent, for that duration is *utrinque clauſa*, namely, with that Man which was once preſent, and that Moment wherein I now write.

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3. My third Argument (which though it be common, is very evident) is this:

It is impoſſible, *ex natura rei*, that any multitude can be actually infinite, or, (which is all one) ſo great that there cannot be a greater, or, *multitudo omnium maxima:* But if we ſhould ſuppoſe an eternal ſucceſſion of Generations of Men, or an infinite *Series* of ſucceſſive individual Men, there would neceſſarily follow an infinite multitude, or a multitude than which there could not be a greater. And therefore *ex impoſſibili*, there could not be ſuch an eternal ſucceſſion of Generations.

The firſt Propoſition, namely, That it is impoſſible there ſhould be an infinite multitude, or (which is all one) a number actually infinite, is evident by thoſe many contradictions, abſurdities, and intollerable incongruities that would follow upon ſuch a Suppoſition.

It muſt needs be granted that an infinite multitude is the greateſt multitude that can be, there can be no greater; if there can be a greater, then the former was not infinite. For when we have to do with any thing whoſe very eſſence, as I may call it, conſiſts in being greateſt, there *majus* and *minus* do alter the very eſſence of the thing, and is identical with *magis* and *minus:* A greater or larger Line, or Superficies, or Body is not *magis linea, ſuperficies, aut corpus,* than a ſhorter, narrower, or leſſer Line, Superficies, or Body, becauſe they agree in the ſame common nature, the one as well as the other is a Line, Superficies, or Body. And ſo of other things.

But when the very Eſſence of the thing conſiſts in a certain eſſential difference of *major* or *minor,* there *major* or *minor* vary the kind.

And therefore a Line of two foot long (with relation to that extent) eſſentially differs from a Line of a foot long, which under that notion is eſſentially greater or more extended than a Line of a foot long, and it is impoſſible that a Line of a foot long ſhould be as long as a Line of two foot long, as it is impoſſible that a part ſhould be equal to the whole. And yet upon the ſuppoſition of an infinite multitude, it muſt neceſſarily follow that one infinite multitude muſt be greater than another, and yet both infinite; upon the ſuppoſition of infinite Generations of Men, there muſt have been an infinite multitude of antecedent Individuals and Generations of Men a million of years ſince, and yet neceſſarily by the addition of thoſe Individuals that have accrued ſince in that great Period of a Million of years, there muſt needs be an acceſſion of a vaſt number to that multitude that was before, whereby it muſt neceſſarily be greater, and yet both ſuppoſed infinite, that is, ſuch than which there can be nothing greater. Again, the multitude of the individual Men muſt be infinite, and yet the multitude of theſe Mens Eyes muſt be double to the number of Men, and yet both be infinite. And it is but a vain thing to ſay, that though the collection of Men be antecedently infinite, yet it is *clauſa* and *finita* in the preſent extreme: as if a Line ſhould be extended infinitely from the point *A*, the Line would be finite at the point *A*, —*A* though infinite towards the other part; and the appoſition of the acceſſional number of Men is to that part that is finite: For though the Generations of Men are limited towards the extreme that is next us, or at the Period of a Thouſand years before us: and though the appoſition of the acceſſional number be towards this hithermoſt extreme which is *clauſa*

or *finita*, yet the appoſition is to the whole number or multitude, and the collection thereof, and therefore the abſurdity of the Suppoſition of an infinite pre-exiſting multitude, which is more enlarged by the increaſe, is equally evident, as if we could ſuppoſe an appoſition of the number to any other part; for the ſcope of the Argument is to prove the incompoſſibility of Infinite and Multitude, becauſe no Multitude can be greater than Infinite, yet ſuch would it neceſſarily be, if we ſhould ſuppoſe the multitude now greater than it was a thouſand years before: And to render it yet more plain, ſuppoſe on the other ſide we ſhould take the other Operation of Arithmetick, namely, Subduction: If out of that ſuppoſed infinite multitude of antecedent Generation, we ſhould by the Operation of the Underſtanding ſubduce Ten, whether we ſubduct that Number of Ten out of the laſt Generations of Men, or out of Generations a thouſand years ſince, or indeterminately out of the whole Collection, certainly the reſidue muſt needs be leſs by Ten than it was before that Subduction made, and yet ſtill the Quotient muſt be as great as before, which is ſtill infinite.

Again, the incongruity of the Suppoſition of an infinite multitude appears in this, that the part muſt be as infinite as the whole: It is the Inſtance of *Algarel*, in his Dialogue with *Averroes*; the Number of 4 multiplied into it ſelf produceth the Square Number of 16, and that again multiplied by 4 produceth the Cubick Number of 64. If we ſhould ſuppoſe a multitude actually infinite, there muſt be infinite Roots, and Square and Cubick Numbers, yet of neceſſity the Root is but the fourth part of the Square, and the ſixteenth part of the Cubick Number. The Inſtance of *Algarel*, in his firſt Diſputation with *Averroes*, which *Averroes* endeavours to anſwer (but tyres himſelf in vain to do it) may explain this Conſequence: The *Sun* paſſeth through the Zodiack in one year, *Saturn* paſſeth through it in thirty years; ſo that the Revolution of *Saturn* to the Revolution of the *Sun* is as one to thirty, and conſequently as one Revolution of *Saturn* contains thirty Revolutions of the *Sun*, ſo two Revolutions thereof muſt contain ſixty Revolutions of the *Sun*, and ſo if we ſhould ſuppoſe their Revolutions infinite, yet the proportion of the Revolutions muſt neceſſarily hold the ſame, namely, in all the whole Collection, the Number of the *Suns* Revolutions muſt be thirty times as many as the Number of *Saturns* Revolutions, and conſequently the Revolutions of *Saturn* can be no more than one thirtieth part of the Revolutions of the *Sun*, and yet both being ſuppoſed infinite, the part, namely, the thirtieth part, muſt be as great as that whereof it is the thirtieth part, which is impoſſible.

And this impoſſibility holds in all other things that have ſucceſſion or extenſion, as in quantity, motion, ſucceſſive duration of things, in their nature ſucceſſive. But it is more plain and conſpicuous in diſcrete quantity, or different Individuals, which are already meaſured by Number, without any breaking the continuity that is in things that have continuity, as continued quantity and motion. And therefore they that go about to demonſtrate the impoſſibility of Eternal Motion, *à parte ante*, or infinite extenſion in a Body, Line, or Superficies, do firſt break it into parts to meaſure them, and reduce them to diſcrete quantity, becauſe the demonſtration is more clear and ſenſible thereby, and therefore they break

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the Measures of Motion into Hours, Days, Years, or such like Measures, or into Periodical Revolutions, and so they break continued Quantity into Palms, Feet, Perches, or the like; because though the repugnancy of Infinitude be equally incompetible to continued or successive Motion, Duration, or continued Quantity, and depends upon the incompossibility of the very nature of things successive or extensive with Infinitude, yet that incompossibility is more conspicuous in discrete Quantity or Multitude, that ariseth from parts or Individuals already actually distinguished: But the reason of both is the same, especially if broken and divided into real or imaginary parts.

But in the Matter in question, namely, Multitude of successive Men, or successive Generations of Men, there is already a separate, divided, discrete multitude, without any antecedent work of my Understanding, or otherwise, to reduce it into parts or discrete multitude; and so the Instances of the Absurdities that arise by an infinite multitude of Individuals and distinct Generations, is made more plain and open to view: And he that is desirous to prosecute these *Asystata* of Infinitude and Multitude, let him resort to the Prelections of *Faber*, collected by *Monsuerius*, in his *Metaphysica demonstrativa de infinito*.

And to say the truth, there are none of the Ancients that have any weight in them, that do not agree, that it is impossible that any Quantity, either discrete or continued, should be actually infinite, but only potentially, either by addition of supposed parts to either, or by division of Quantity continued into parts infinitely divisible: But the greater difficulty rests in the Assumption, which is next to be considered.

The second Proposition is this, That if Eternal Generations of Men were admitted, there would be this absurd Consequence, that a multitude given might be actually infinite, which remains to be proved.

The Objection that stands in the way seems to be this, That there is no repugnancy that Multitude might be possibly infinite, for as we may without any inconvenience suppose, that the Generations of Mankind might be sempiternal or eternal, *à parte post*, so there is no inconvenience to suppose them eternal, *à parte ante*, for they never co-exist, but are successive, and so do not constitute any multitude co-existing actually infinite, which is indeed impossible; but there is no implication or repugnancy that there might be an infinite succession of Generations, for they are not together, but one Generation passeth and another succeedeth.

And hence it is they say, that *in moventibus vel causis per se subordinatis*, there cannot be *processus in infinitum*, but we must necessarily fix in a First Mover, between whom and the last Motion or Effect there cannot be a *series* of Infinite Causes for two Reasons: First, Because if there were Infinite Movers or Causes, moving *per se* to the same effect or motion, the motion would be infinite, and so would the time wherein that motion would be absolved, for *infinitus motus non fit in finito tempore*. Secondly, And again, there would be an actual Infinitude of co-existing Causes, which is impossible; and therefore for the purpose, to the production of this generation of an Insect by putrefaction, there is not an infinite *series* of Causes *per se* co-operating to its production, but the *series* of Causes is finite; for the active qualities of the Elements move the Matter, and

the Heat and Influence of the Heavens agitate and move, it may be, the Elementary Body, and the Intelligences move the Heavenly Bodies, and Almighty God the *Primum Movens* moves the Intelligences, and these are finite in number: But in *causis aut moventibus accidentaliter subordinatis* there may be an Infinitude or Eternity, thus the Father may beget the Son, and the Grandfather begat the Father, and so backward to Eternity, and so in the successive productions of all Animals *ex semine*. For though the Individuals successively existing from all Eternity, must needs be infinite, yet they do not coexist, but as one Generation comes another decays, and so make no infinite multitude; and consequently, that all the absurdities that are heaped upon the Supposition of infinite multitude or numbers, conclude nothing to the matter in question, because there is no infinite multitude, because no infinite Individuals or Generations of Mankind coexisting: And though this cannot at all, according to their supposition, any way admit the possibility of an infinitely extended Body, Line, Superficies, or Place, because that would be an actual infinitude in extent; yet as to successive continued things, as successive Motion, as that of the Heavens, and successive Duration, as that of Motion which we call Time, there is nothing of inconvenience according to their Supposition, if they be infinite, eternal, and without beginning; because though they consist of infinite Parts, yet they are not altogether, or coexisting, without which there is no real Multitude.

So that the Question will be hereby reduced to this Point, Whether in this succession of Generations and Individuals of Mankind there be such a Multitude produced that is consistent with Infinitude therein.

I shall not here lay hold of that Supposition of the Immortality of the Souls of the several Individuals of Mankind (which if supposed, would make an infinite multitude actually coexisting of separate Souls) because some of those that maintain the Eternity of Mankind, deny the Immortality of the Soul; others deny the Immortality of the Soul in its individuation, supposing it to resolve into a certain common Element of Souls; and others, as the *Pythagoreans*, though allowing the Immortality of Souls in their individuation, yet suppose a finite number of Souls might supply the infinite Successions of Men by Transmigration of these in their due time: This I lay aside, because it would necessarily occasion other Disputes with Men of those Perswasions.

I do therefore say, That upon the Supposition of the Eternal Succession of the Generations of Men, and the infinite successive Individuals thereby arisen, there doth arise such a Multitude as is equally inconsistent with Infinitude, as if the Individuals had been all coexisting, and that all those foregoing *Asystata* that render any number or multitude of coexisting Individuals impossible to be infinite, render the multitude of successive Individuals impossible to be infinite; abating only the excrescence of infinite coexisting Men to an infinite *moles*, which inconvenience indeed falls not upon the successions of Individuals, some by death and corruption making room for new Successors.

And to make good what I say, I shall deliver these ensuing Conclusions.

1. That as in things that are present, while they actually are, they also necessarily are; so in things that have been, they have been while they were,

were, actually and neceſſarily: It is as certain that my Father and Grandfather once actually were *in rerum natura*, as it is certain that I now actually am; for though in things that are yet to come, they are only in poſſibility, and not in act; yet in things that have already been, they have been as actually as what now is; *in præteritis non datur poſſibilitas*; and it is as certain that what is paſt, once was actually preſent and exiſting, as what now is, is actually preſent and exiſting. This I ſay to prevent that Objection, That things paſt and things to come are of the ſame nature in relation to their exiſtence, and that only our manner of apprehenſion is that which makes things future only *inter poſſibilia*.

2. That things that once exiſted and are now paſt, do as really conſtitute a multitude (if many) as things that are coexiſting: It is as evident that the Grandfather and Father and Son did as really make up a multitude, that is, one man, and one man, and one man, (which multitude we call artificially three, though the Father and Son were both *Poſthumi*) as if they all had or did all now exiſt together; and it is as true a Predication to ſay that theſe were many, as it were in caſe they had all coexiſted, or were now coexiſting: And thoſe three Revolutions of the Firſt Moveable that were paſt three days ſince, are as really a multitude of Revolutions, as the three Stars that this hour coexiſt in Heavenly Conſtellation are a multitude of Stars: and when I ſpeak of a multitude, I mean more than one.

3. That although number, or the digeſting things under this or that number, whether Collective, as three, ſix, nine; or Ordinal, as the ſecond, third, or fourth, be but an operation of the Underſtanding only, yet antecedent to any act of the Underſtanding, and without the help of it, *unum* and *multa*, and of thoſe *multa, plura*, or *pauciora* have a reality: *Plato* is one, and *Plato* and *Ariſtotle* are *multi*, or more than one; and *Plato* and *Ariſtotle* and *Tully*, are a greater multitude than *Plato* and *Ariſtotle*, antecedently to any operation of the Underſtanding.

4. That antecedently to any act of the Underſtanding, even in thoſe things that have a ſucceſſive exiſtence, and are not all together, there is as real an unity or multiplicity as in things coexiſting. For inſtance, The Revolution of Heaven that was diſpatched the firſt Natural day of the laſt week, was as really, as that Revolution which now is in concluding really is; and as it really was, ſo it really was but one: And the Revolutions that followed in the two next Natural days were really more than one, and therefore *multa*; and the Revolutions of the three next days after, was a multitude greater than the Revolutions of the two former days; and all thoſe ſix Revolutions were really a greater multitude of Revolutions than any one of the former multitudes, and this without and before any operation of the Underſtanding, though indeed the Underſtanding gives them their numeral diſtinction of one, and two, and three, and ſix.

5. That the incompoſſibility of Infinitude with Multitude, or the impoſſibility that any Multitude ſhould be infinite, doth not ariſe either upon the exiſtence or non-exiſtence of the Subjects of that Multitude together at this or any other determinate time, but from the very nature of Multitude it ſelf: So that whether the *multa* were preſent, or paſt,

or fixed, or ſucceſſive, yet the very ſuppoſition of Multitude doth exclude the poſſibility of its infinitude: For 1. It ſuppoſeth a diſcrete Quantity, and any Quantity muſt needs be limited. 2. It ſuppoſeth a conſiſtence of many Unities into which it muſt neceſſarily be reſolved, as the conſtituent Subject or Matter of them. 3. It ſuppoſeth a Term which cannot be the greateſt: It is impoſſible that any Multitude can be ſo great but that a greater may be given: So that as although there were no Man in the World to take notice of it, every Triangle would contain three angles equal to two right-angles, though no Man were in the World to diſcover or aſſent to it; ſo though there were no things in the World exiſting to be denominated *multa*, and no Underſtanding in the World to form the conception of it, it would be an eternal Truth, That what conſiſteth of many Unities, as all Multitude neceſſarily doth, cannot be Infinite, nor conſequently any Multitude ariſing by ſucceſſion cannot in the nature of the thing be Eternal.

Upon the whole matter therefore, I conclude that it is impoſſible that the Generations of Men or their ſucceſſive Individuals can be Eternal; that a Multitude doth as well ariſe by ſucceſſive as by coexiſting Individuals; that if the Generations of Men and their ſucceſſive Individuals were Eternal, there would neceſſarily follow, that the multitude of ſuch Individuals were infinite as well as if they were all coexiſting, and that it is equally repugnant to the nature of multitude, whether of ſucceſſive or of coexiſting Individuals to be infinite: Therefore there could not be ſuch an eternal ſucceſſion of Individuals or Generations.

And that this Suppoſition, That multitude of coexiſting Individuals, or of Cauſes or *moventes per ſe*, cannot be infinite; but that ſucceſſive Individuals or Cauſes and Effects *per accidens* might be infinite and eternal, is in truth a Suppoſition not fitted to the truth of things, or grounded upon any rational difference between the things, but a Suppoſition fitted merely to ſerve that other precarious Suppoſition which *Ariſtotle* and his followers had taken up touching the Eternity of the World.

And theſe ſhall be all the Reaſons that I ſhall trouble my ſelf withall againſt the Eternity of Mankind, or the ſucceſſive Generations and Individuals thereof; having willingly declined thoſe many other Ingenious Reaſons given by others (as of the Impertranſibility of Eternity, and the impoſſibility therein to attain to the preſent term or limit of antecedent Generations or Ages; the neceſſity of every *poſterius* to have a *prius*, that there be an equal number of *priora* and *poſteriora*) which either are ſo many various Explications of the Reaſons going before, or at leaſt are not ſo evidently concludent, or are ſubject to Exceptions in ſome particulars.

The Objections both againſt the Reaſons before given, and againſt the Suppoſition it ſelf, I ſhall take up after the next Chapter, wherein I ſhall examin the other Suppoſition before mentioned, namely, The eternal exiſtence of ſome firſt Man and Woman, and the ſucceſſive Generations from them, wherein, becauſe it is touched before, I ſhall be brief.

CAP.

CAP. V.

Concerning the Supposition of the first Eternal Existence of the common Parents of Mankind, and the production of the succeeding Individuals from them.

I Come to that other Supposition, namely, of the Existence of some one Man and Woman the common Parents of Mankind eternally, and the successive multiplication of the Race of Mankind from them by the ordinary course of generation. And although this Supposition carries with it the clear evidence of its absurdity, and therefore may seem to be scarce worth the pains of a Confutation; yet because it lyes in my way, and the Observations upon it may be useful for other purposes, I shall say somewhat concerning it.

This first eternal Pair we cannot conceive to have an existence by a bare course of Nature, without an eternal Creation of them by Almighty God, and an unintermitted Influence from him to support them in a state of Incorruptibility through the vast abyss of Eternity: For he that will suppose things purely under that course of existence that is proper to them by the course of Nature, must needs suppose the Individuals of the humane Nature to have been always such, and of such a Frame as now they are, that is, mortal and corruptible Beings; and though their Ages might anciently be of a longer continuance than now they are, yet (upon a bare natural account) they could not be conceived immortal, incorruptible, immutable, no more than they are now.

Therefore since the great admirers of Nature do therefore frame their *Hypotheses* of an eternal Succession of Men, because they think themselves bound to think that all things have ever been as now they are, and because they will not substitute other *Hypotheses* of the Origination or Existence of things in any other manner than they now see them. Certainly as to these, and *ad hominem*, it is an Evidence beyond contradiction, that there never was any such pair of Man and Woman that eternally existed, but that all Men and other perfect Animals, if they were eternal in their *Species*, were eternally produced *ex prius genitis* as now they are, and that there was no one first individual of Man or Beast that had an eternal Existence, because such a Supposition equally crosseth that course of the nature of things which now they see, which therefore they make the standard, and their measure of things that are past.

They therefore that must support an existence of the first individual Parents of humane Nature, and that those Individuals had an eternal existence, must necessarily suppose that they had that existence by an eternal Creation of Almighty God, and an eternal Influx and Support from him in that incorruptible estate through all the vast extent of an eternal duration.

And by this means they do think, and that truly, that they assert a dependence of the *Species* of things upon Almighty God, which cannot possibly be supposed to be dependent upon him, unless they had in their indivi-

individual nature their exiſtence from him; ſince it is impoſſible there can be any Suppoſition of the exiſtence of any *Species* (as for inſtance, the *Species* of Man) unleſs it be ſuppoſed to exiſt in Individuals; nor conſequently a dependence of the *Species* of Mankind upon God as its Cauſe, unleſs there were a dependence of the firſt Individuals thereof upon him *in fieri* as their Cauſe: And they likewiſe hope (but vainly) hereby to avoid the inconveniences of ſucceſſive eternal Generations without any firſt *Caput* or *Radix* of thoſe Generations, though they fall hereby into the ſame difficulties, and others that are equally intricate and inexplicable.

And although in this Suppoſition we muſt admit the firſt pair that were the Roots of Mankind did herein differ from the ſtate of Mankind now, that whereas now Men live ordinarily ſeventy or eighty years, and are ſubject to Death, yet thoſe firſt *radices humani generis* were by the Influence of the Divine Power immortal, and not confined to the age incident now to Mankind, but were able to endure the immenſe duration of an eternal being; yet we muſt alſo ſuppoſe that in other reſpects they were of the ſame Make with theſe individuals of Mankind that are now: For otherwiſe inſtead of a ſuppoſition of an eternal being of the firſt individual Man and Woman that had their being by eternal Creation, we ſhall fall into a ſuppoſition of ſomething that was not in truth Man. And therefore, as according to the Doctrine of *Moſes* and the Truth, *Adam* the firſt created Man, though conſiſting of a compoſition intrinſecally diſſolvable, had he continued in Innocence, ſhould or might have held by the continued Influx of the Divine Will and Power a ſtate of immortality and indiſſolubleneſs of his Compoſition; yet as to the Eſſentials of his nature, and the Integrals thereof, he ſhould have been and continued like other Men.

And therefore thoſe firſt imaginary eternal Individuals, the Root of Mankind, ſhould have conſiſted of Fleſh and Blood and Mind and Soul and Body as other Men do, they muſt have the ſupport of their Lives by receiving of nouriſhment, by digeſting thereof according to the various proceſs of Digeſtion as we do, they muſt draw in their Breath or Air and emit it again as we do, they muſt have had the like ſucceſſive motion of the Heart and the like circulation of their Blood as we have, the like local motion of their Bodies, the like variation and ſucceſſion of Thoughts as we have; and though the ſuppoſed Eternity of them ſhould have excluded from them corruption or diſſolution in that vaſt Period of Eternity, yet even that duration of his muſt be in this reſpect like ours, that it was a ſucceſſive duration, a duration that was meaſured out by the ſuppoſed coexiſtence of the eternal ſucceſſion of days, and months, and years: And ſuch a duration, as though there had been no ſuch collateral or coextended extrinſick meaſure, yet it was intrinſecally ſucceſſive, and not indiviſible, becauſe he was in his nature a corporeal ſucceſſive Being as well as we; and as we in the very Conſtitution of our *Automaton* have certain ſucceſſive gradual marks and ſigns and operations, whereby though there were no external ſucceſſive meaſure, by compariſon whereto the ſucceſſion of our duration might appear, as the Motion of the Heavens and Heavenly Bodies, and the like; yet by thoſe connatural ſucceſſive marks and ſigns our beings and durations would be

be measured, and the successions thereof would appear; as the vicissitudes of Respiration, the Pulses, Palpitations of our Hearts, the variety and succession of acts of Sensation, the succession of our Thoughts and Cogitations; whereby it is apparent we have not only intrinsecal marks and distinctions of our successive duration, but also that our operations are various: I do, I think and speak that to day which I did not yesterday, the number of my Respirations or Pulses were thus many yesterday, and as many to day, and it may be more, upon the variety happening in my Body by local motion, repletion, or any casual perturbation. And as all this I find in my self and other men, so I must needs conclude the very like was in these first Individuals that are supposed to be eternal: For though they had (*ex suppositione*) an immortality and preservation from putrefaction or corruption by the eternal and continued influx of the Divine Goodness and Power, yet they were not in a state of perfect immutability in their actions, operations, or existence: For then we must suppose them not to have been Humane Creatures, but Gods, or at least Angels; which nevertheless are not wholly exempt from their degrees of mutability and variation, at least in their intrinsick operations: it being the sovereign Prerogative of Almighty God only, to be without variableness or shadow of change.

And now I shall not inquire what are become of those eternal pair of first Parents, where they are, or if they are dead, how it came to pass they could weather and stand the shock of an eternal duration, and yet be at any time subject to a dissolution. It may be said they were translated into Heaven, or possibly they may be since dead, the Divine Beneficence subducting in this or that point of time that Influence which it communicated from the time of their first Creation, whereby they were kept in a state of immortality till that moment of the subduction thereof wherein they began to undergo the common Laws of Dissolution.

But I do say that there is the same impossibility that any corporeal Individual of such a Make and Constitution as Man is, should be eternal *in hoc individuo*, as there is in the eternal succession of several Individuals: Such a kind of duration cannot be sustained by succession of Humane Individuals, much less can it be sustained by any single Individual of Humane Nature.

1. The same absurdities and impossibilities would follow upon the admission of the Eternity of one single Humane Individual as of successive; because that Individual hath necessarily a concomitant succession of interpolated Motions, namely, the Pulses of the Heart, and the successive Motions of Respiration, and divers others. All which will produce multitudes uncapable of Infinitude, as much as the several individuals of Mankind.

And among all these Pulses and Respirations some one will be necessarily, infinitely, actually distant from some other Pulse within the limits of time, whereupon all those former heaps of incongruities and impossibilities before observed will be consequential.

2. It is impossible that any Being can be eternal with successive eternal Physical changes, or variety of states or manner of existency naturally and necessarily concomitant unto it. But if we should suppose any one

one Man eternal, yet he must in the very constitution of his being necessarily have Physical changes and variety of states and manners of existence accompanying him, or else we must unman him, and make him another thing: Therefore no individual Man can be eternal. The Major Proposition is evident to any that consider it. For let us suppose the first Man created eternally in a state of Childhood, Youth, or Rest, it is necessary that he continue eternally in that state, and the first moment he moves or alters that state, must be on this side the uttermost limits or compass of Eternity, namely, within such a compass as is finitely distant from this hour, for two Causes: Because Rest must needs be antecedent to his Motion, his Childhood antecedent to his Youth, and that to his Manhood; and therefore if his Rest, Childhood, or Youth were eternal, his motion or alteration of his state cannot be eternal, for then this contradictory Proposition should be true, That Man did eternally rest and eternally move, or which is all one, eternally move and eternally not move, for Rest in Bodies is but an absence or privation of Motion: That he was eternally a Child, eternally a Youth, and eternally a grown Man.

But let us suppose that it were possible that he might be created eternally in a state of Rest, or yet in some determinate point within the extent of Eternity he should begin to move, that interval that anteceded his Motion must be either in a finite or infinite distance from us: If we should suppose it infinite, we contradict our selves; for we shall make the first Motion eternal, and consequently infinitely distant from us; and yet to have a beginning, and such a beginning that was infinitely later than the Eternity of Rest. And if we shall suppose the interval between the first imaginary beginning of that Rest and the beginning of that Motion, finite, (suppose for the purpose, the time of a Month) then we shall upon the very same account make the beginning of that Motion to be less than eternal, because begun a Month after what was eternal; and consequently also we shall make the beginning of that Rest to be not eternal, because that first Motion having a beginning after Eternity, could not be eternal; nor consequently the beginning of that Rest could not be eternal, for, *ex suppositione*, it is but a Month ancienter than that Motion, which was not eternal: and a finite duration added to a finite duration cannot make an infinite duration: Therefore if Man, *ex suppositione*, were created in any state whether of Motion or Rest, Childhood, Youth, full grown Age, or whatever other state it be, he must necessarily so persist an infinite duration, and if he undergo any alteration from that state, that alteration must be in time, or of a puisne date to Eternity.

The second Proposition is this; That Man in his very Constitution is such, that there is unceſſantly and naturally concomitant with him Physical changes, and a variety of states and real changes, without which he would be in vain, and indeed he could not be what he must be supposd to be, namely, essentially a Man.

It hath been heretofore shewn what great variety of Motions and Alterations do necessarily accompany his very Constitution, and let any Man but think with himself what a kind of thing Man would be during all that immense abyss of his first being, if he be supposed eternally and unchangeably resting, unchangeably moving, eternally and unchangeably

a Child,

a Child, a Youth, a full grown Man, or any other determinate unchangeable ſtate. As we have before obſerved, though we ſhould admit a poſſibility of an eternal Creation of Man or of any created Being whatſoever, we muſt ſuppoſe him created under ſome of the conditions which are incident to an individual nature; he muſt be created in ſome determinate *ubi*, and in ſome determinate *ſitus* and ſtate; he muſt be created in Reſt or in Motion, a Child, or a Youth, or a full grown Man: This Man, unleſs he put off his nature, muſt in ſome finite or limited time at leaſt after the eternal imaginary moment of his Being move locally, or with the Motions of alteration, augmentation, growth or decay. Theſe and the like Motions are, upon the account of his Conſtitution, neceſſarily incident to him within certain ordinary Periods, and are connatural to his very Conſtitution.

And therefore it is irrational, and indeed impoſſible that this created Man ſhould eternally be in a ſtate of Reſt without Motion, without Alteration, Augmentation, Diminution; and yet thus he muſt be conceived to be, if he were eternally made: If once we admit a variation from the ſtate of his Creation, that variation muſt be neceſſarily after an eternal and infinite duration, and therefore within the compaſs of Time: If this Man ſhould be conceived to move or alter his condition within a year, nay a million of years after his Creation, his Creation could not be eternal, becauſe his Creation would be antecedent to that firſt alteration but a finite time; and that firſt alteration could not be eternal, but within the compaſs of a finite time; and conſequently his Creation anteceding that firſt alteration by a finite time could not be eternal; or of an infinite diſtance from the time wherein I write: And conſequently this Creation of Man is not, cannot be eternal, becauſe Man in his very Conſtitution hath the neceſſary concomitants of thoſe alterations that are inconſiſtent with an eternal duration, and ſuch as he cannot be without, according to the very intrinſick fabrick of his native Conſtitution one Week, much leſs an eternal duration.

Again, the truth is, the very Suppoſition of eternal Creation of any Being eſſentially diſtinguiſhed from Almighty God is a perfect contradiction in it ſelf: That which is eternal, is that which is without beginning; that which is created, hath neceſſarily a beginning, although by Creation.

But I ſhall not proſecute this any farther, the Suppoſition of any individual of Mankind eternally created is ſo abſurd that it deſerves not half the words that have been uſed about it: But I have not been ſo prolix in it for the ſake of the Suppoſition it ſelf, but rather becauſe it gives a fair opportunity of clearing of ſome things which could not be ſo aptly done otherwiſe.

And upon all this that hath been ſaid, although it ſhould be admitted that there were an eternal being of a firſt Man and a firſt Woman, yet it were impoſſible in Nature that the Generations of Men ſhould be infinite; and this appears upon the Reaſons here given, and likewiſe upon the former Conſideration of the impoſſibility of the Eternity of Mixed Bodies. For it is abſolutely neceſſary that there be an interval between the firſt exiſtence of the firſt created Parents of Mankind and the production of any deſcendent from them by ordinary courſe of pro-

creation or generation: For ſuch a production cannot by any poſſibility be as ancient as the producents; though Creation may be inſtantaneous, yet Generation in its firſt inception, complement and perfection, cannot be inſtantaneous. *Ideóque neceſſe eſt ut primus homo per procreationem ſive naturalem generationem productus, per novem menſes integros poſt primam conceptionem in utero lateat, & demum poſt ejuſdem in lucem editionem, per omnes gradus infantiæ, pueritiæ, juventutis, ad complementum maturioris ætatis deveniat: unde etiam neceſſe eſt ut primus homo per generationem, poſterior ſit primis hominibus per creationem, per ſpatium ad minus novem menſium. Unde ſi daretur primos humani generis parentes extitiſſe per æternam creationem, impoſſibile eſt primos homines ex iiſdem prognatos extitiſſe per æternam generationem; parentum enim exiſtentia præcedere debet exiſtentiam filii, aliter filius per generationem & pater in ſuis poſitivis exiſtentiis erunt æquè antiqui, utrique æterni: Et ſi detur exiſtentia patris (licet non ſub ea relatione) ante exiſtentiam filii, filii exiſtentiâ principium habeat neceſſe eſt poſterius exiſtentiâ patris, & ſic non æquè antiquum, & conſequenter nec æternum.*

Upon the whole matter, I do conclude, That although the Creation of the common Parents of Mankind might be *de facto* a very long time ſince, nay although there can be no imaginable time nor imaginable point wherein the Creation of the Individuals might not have been by the Divine Power; nor no imaginable point but that the Creation of the World or Mankind might have been ſooner, if the Divine Will had been ſo pleaſed; (for that denotes only a poſſibility of pre-exiſtence ſooner than it was, if the infinite Agent had ſo pleaſed, and not an actual Eternity) yet it is not poſſible in the nature of the thing that Mankind or any other created Being, that hath ſucceſſion either continued or diſcrete neceſſarily accompanying it, ſhould ſuſtain an actual, eternal, and conſequently infinite duration.

CAP. VI.

Certain Objections againſt the Truths formerly delivered, and againſt the Reaſons given in proof thereof, with their Solutions.

THere are certain conſiderable Objections againſt thoſe things that are delivered in the precedent Chapters, and againſt the concludency or evidence of thoſe Reaſons, theſe I have delivered over to this Chapter.

The Firſt *Objection* is thus: That Eternity, and Infinite, and the notions thereof are too large for our Underſtanding, and we are loſt when we go about to frame Conceptions of them; and all our Argumentations touching them are inevident and unconcludent, becauſe our Underſtanding being but a finite power is capable only of finite Objects, and that the *media* whereby we go about to evince any thing muſt needs be finite, or otherwiſe they are not comprehenſible by us, and therefore wholly diſproportionate to frame Concluſions touching an Object that of

of all hands is agreed to be infinite; our Faculties are proportionate to those Objects that are derived to us by the help and instrumentality of Sense, either immediately, or at least mediately, and therefore are not proportioned to the nature of Eternity and Infinitude. And therefore our Reasoning touching these matters is as if he that were born blind should Philosophize touching Light or Colours, whereunto he hath not, nor never had a Faculty accommodate.

I answer, It is true that there is something which I may call Positive in the conception of Eternal or Infinite, which the Understanding cannot master. But since it is very plain that all things in the World come under the distribution of finite or infinite, or that which hath a beginning, or that which hath not a beginning and is consequently eternal; If I can (as most certainly I may) have a conception of what is finite, and what are the Laws and necessary Connexions of it, I can by that Notion conclude that whatsoever is finite, or that must be under the Laws and Rules of finite Beings, cannot be infinite: I have a Globe in my Hand, though I know not the Eternity, yet I know that whatsoever hath or must necessarily have limits or *fines*, is not, cannot be infinite, and therefore this Globe cannot be infinite: And if I can find in any other thing a parity of Reason, I do and may remove infiniteness from it as reasonably and evidently as I do from this Globe I hold, or this Hour I write, or this Life I live: I do therefore certainly know that whatsoever is limited or bounded by somewhat that necessarily anteceded it, cannot be eternal.

I do not determin what Eternal or Infinite is in the Positive nature of it, only I remove Infinitude from what I find to be necessarily finite; and determin, that whatsoever hath bounds or limits to it, is *quid finitum*, and not *quid non finitum*; and whatsoever hath necessarily a beginning is *quid temporale*, and not *quid æternum*: And all my endeavour hath been to shew that the things before disputed are and needs must be of such a nature as comes under the notion of what I know, namely, *finitum* or *temporale*; and not under the negation thereof, namely, *infinitum*, or *non finitum*, or *sine principio*.

2. *Object.* That by denying the possibility at least of Eternity to created successive Beings, I put a restraint to the infinite Goodness of God, who thereby is straitned in the communication of his Goodness, coeternal to his being, which is part of his Divine Perfection; and also to the extent of his Power and Omnipotence: which is too bold and adventurous.

I answer, Touching the Goodness of God, and the necessity of his communication thereof, I have before said enough in the Second Chapter, I shall not repeat it: But as touching the other restraint upon his Omnipotence, I say, the denying of Power in God to make a Creature, especially a successive created Nature as ancient as himself, is no more a derogation from his Power, than to deny him Power to make a Creature as great, and as good, and as powerful as himself: The Infiniteness of his Duration is a part of the Divine Perfection (in my judgment) incommunicable to any created Being, and it is part of the eminence, and excellence, and transcendence of that Divine Perfection, as well as others that are not communicable to any created Being. But secondly,

Suppose

Suppoſe that Eternity might be communicated to any created Being, as for the purpoſe, to the more pure Mental Natures, yet I do not diſparage the Omnipotence of God when I ſay it is not communicable to a ſucceſſive Being that is *in fluxu*; not for want of Power in God, but for want of Capacity in the nature of the thing to ſuſtain ſuch a duration upon the intrinſecal diſcongruity of the one to the other: It would not be a derogation to the Divine Omnipotence, to deny that the Diagonal of a Square ſhould be commenſurate in length to the Sides; for the nature of the thing will not bear it.

3. *Object.* But a late Author hath with oſtentation enough produced an Argument whereby all thoſe Reaſons and Inſtances concerning the impoſſibility and abſurdity of infinite Generations, infinite Individuals, and infinite Motion ſuppoſed to have actually exiſted, are eaſily diſcharged; and therefore he concludes, that notwithſtanding all that hath been ſaid, the Generations of Men might have been actually eternal, and that there may be infinite numbers of ſucceſſive Men, Generations and Revolutions, and that conſequently it is not repugnant that infinite may be greater than infinite; that there be infinite Days, and Years, and Men, and yet in that infinite 365 times more Days than Years, yet both infinite; the number of Men infinite, and yet the number of their Hands or Eyes double to the number of the Men: That the Suppoſition that theſe are contradictions, are but miſtakes and deluſions of our Underſtanding not able well to digeſt the buſineſs of Eternal, Immenſe, or Infinite. And this he thinks he proves by two principal Inſtances which he thinks are unqueſtionable.

1. That there is and would be ſuch a thing as Duration, and that duration would be ſucceſſive though there were no being *in rerum natura*, which he calls *tempus æternum.*

2. That there is unqueſtionably an infinite Space actually: And yet all theſe imaginary conſequences and abſurdities follow upon that Suppoſition, which are urged as the Reaſons againſt the ſucceſſive eternal duration of Individuals above mentioned: For in that infinite ſpace there are infinite Miles and infinite Leagues, and yet thrice ſo many Miles as Leagues: The extent at both the extremes of Eaſt and Weſt infinite; yet each extreme divided, infinite: and many ſuch the like Inſtances, which yet notwithſtanding avoid not the truth of an infinite extenſion.

To this I anſwer briefly in this place, (for I have elſewhere examined at large the truth of both theſe *Hypotheſes*) I do in the firſt place premiſe, That as the exceſs (as I may call it) of Being, namely Infinitude, is difficult to apprehend; ſo the defect of Being, namely Nothing, is very difficult to apprehend: When we go about to apprehend ſimple Nothing, yet our Imagination clothes it with ſomething like Exiſtence, and gives imaginary being to Nothing, before we can come to ſhape a thought concerning it.

And certainly Duration and Space are in themſelves relative to ſomething that doth *durare*, and ſomething that is *ſpatiatum*, namely, ſomething extended: And if any (thing I cannot ſay) but if any Conceptible is more nothing than another, Duration without a thing that dureth, and Space without a thing that is extended in it, is the verieſt, the abſoluteſt Nothing that can be: While they are in conjunction with the

thing

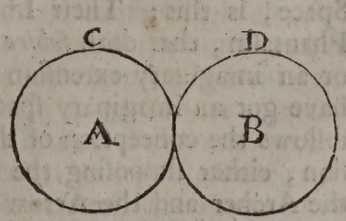
thing that ſuſtains them, they are the meaneſt Being that is, for they are but modes of being; and therefore when the things that muſt ſuſtain them are not, they are the pureſt nothing that can undergo the notion of Nothing.

To ſay there is a duration, whether ſucceſſive, or permanent, or indiviſible, when there is nothing that doth ſuſtain that duration, is a Phantaſm of Nothing under the notion of Something: For it is moſt apparent to any man that will but lay aſide the Phantaſm, That the duration of every thing is diverſified in relation to it ſelf, according to the nature of the thing that endures; and though it coexiſts with a thing that appropriates another kind of duration, as ſuitable to its being, yet it retains ſtill its own duration, as appropriate to it ſelf. Thus the duration of the glorious God is another kind of duration than that of Motion or Bodies, and yet it coexiſts with that duration. Nay poſſibly the duration of a permanent Being (we will take it, a piece of Gold) hath another kind of duration than that of Motion, that is ſucceſſive: So that all the notion that we have of Duration without relation to ſomething that endures, is a fiction that the Underſtanding takes up, and the Image whereby it conceives it, is partly by the ſucceſſiveneſs of its own operations, and partly by thoſe external meaſures that it finds in Motion, rendred a ſucceſſive Nature, and *pars poſt partem*: And thus the imaginative Underſtanding dreſſeth up a Nothing, namely, Duration without a thing that endures, and then attributes to it what ſhe finds in her ſelf, and the things ſhe converſeth with, namely Succeſſion; when really there is no ſuch thing as duration or ſucceſſive duration, unleſs there is ſomething that doth ſo endure.

And that this is nothing elſe but a creature of the Imagination appears by this: No man alive can ſuppoſe that there is any exiſtence of duration that is to be a thouſand years hence, it reſts meerly in poſſibility; yet the Imagination will dreſs up that future duration under certain proportions that it borrows from the things it ſees and converſeth with.

And what is ſaid of Duration without a Body that dures, is in truth to be ſaid of Space without a Body to which it relates, and therefore well called *ſpatium imaginarium.*

The juſt apprehenſion of Space ſeems to be this; That whereſoever there is a Body actually exiſting to which Space relateth, there is an actual ſpace: And therefore if we ſhould ſuppoſe nothing to be beyond the convex Superficies of the laſt Heaven, yet the immediate contiguity of that convex to nothing were a real ſpace, becauſe it denotes a true relation to that which is, namely, the convex Superficies of the higheſt Arch of being: Nay, if we ſhould ſuppoſe that the Univerſe were perfectly ſpherical, and another Univerſe of the ſame dimenſion and figure were created contiguous to it, as *A* and *B*, though they were contiguous only in the point of contingency, yet their two imaginary Poles *C* and *D* would have really a ſpace between, which would be commenſurate to the Semidiameter of both Spheres; for ſtill there is a real diſtance between the parts of two Bodies, and from that relation ariſeth



ariſeth a real ſpace: So if the Air within a concave Sphere or Cube were annihilated or not there, yet there would be a real ſpace between the ſides of the Cube or Sphere though no Body intervened, becauſe ſtill there remained the ambient ſides, to which that ſpace may as well relate and be commenſurate, as if the vacant ſpace were full of Air.

But without relation to ſome Body, there can be no actual Space; for Space is a term meerly of relation to ſomething that is *ſpatiatum.*

But then comes in the Author, and brings *Lucretius* with him, and tells us, that before the World was there was Space, or otherwiſe how could there be room for the Univerſe unleſs there were ſpace to receive it: and ſuppoſeth that if an Archer were upon the convex Superficies of the Heaven there would be ſpace for him, and if he ſhot his Arrow upward, there would be ſpace for that Arrow to fly, or elſe the Arrow would not move from the ſtring.

And all this is very true, and yet it proves nothing of real Space beyond the confines and relation of Bodies.

But as in relation to the infinite active Power of God, nothing had (as it were) a paſſive potentiality to be ſomething, to be a Body, to be a World; ſo conſequently nothing had a potentiality, as I may call it, to become Space when the World was made, and together with the production of Body there was a production of Space: As if at this day in the ſunſhine there ſhould be produced an opacous Body, together with it the ſhadow would be produced: and as the ſhadow, though really nothing when there was no opacous Body, had a kind of potentiality to be, upon the exiſtence of that Body; ſo this abyſs of Nothing had a kind of potentiality to be Space, when ſomething was produced to which it might have relation, as *quid ſpatiatum.*

And the ſame Anſwer is moſt clearly evident, as to *Lucretius* his Archer.

There was nothing, and therefore no ſpace, till the Archer came to the convex of the uppermoſt Heaven, but only a potentiality, if I may ſo call it, to receive him when he was there; and when he ſhot up his Arrow, that ſpace that really was not before, but only potentially to ſerve a Body when it comes there, now becomes ſpace for the flight and return of his Arrow; but when it was returned, now the ſpace no more exiſted for the Arrow, nor for the Archer after his coming from the convex of the higheſt Heaven: ſo that though nothing may be ſpace when it hath a Body to which it may relate, yet till that relation it is not ſpace, but nothing.

And certainly that which impoſeth upon perſons to aſſert an infinite Space, is this: Their Imagination and Phantaſie doth firſt create a Phantaſm, that doth *ſubire vices corporis,* and they fill an imaginary ſpace or an imaginary extenſion with that Phantaſm, and then indeed they have got an imaginary ſpace; I ſay, their Phantaſie and Imagination follows the conception of the imaginary ſpace with an imaginary extenſion, either ſuppoſing the World infinitely extended, or elſe fancying the Archer and the Arrow, and when that is handſomly fancied, the Phantaſm it ſelf doth effectually in the Imagination ſerve the turn to make up a relation between a Body and it, though really there be neither infinite Body, nor infinite Space, till the Body comes to give it its relation.

And

And if men will needs be concluding, that becauſe I cannot deliver my ſelf from the apprehenſion of ſpace *ultra pomœria cœli*, therefore it muſt be ſuppoſed really to be; we ſhall find another imagination hardly able to deliver it ſelf from the apprehenſion of ſomething beyond the laſt Heavens, and again ſomething beyond that, becauſe it cannot frame to it ſelf an apprehenſion of nothing, or of any ſpace to be without a Body in it; and ſo upon the ſame reaſon prove the World infinitely extended.

And yet I appeal to the Phantaſie of theſe very men which either ſuppoſe an infinite empty Space, or an infinite World, whether they can bring their Imagination to ſuch a diſcipline as to ſuppoſe this Infinitude all together, but are fain to go on from one ſtep to another, and to think firſt of a ſpace larger than the Heavens, and then of a ſpace larger than that, and ſo gradually; ſo that if Imagination ſhould be a ſufficient *medium* to prove a real exiſtence, it would only prove an indefinite ſpace or extenſion, not a ſpace or extenſion actually infinite; for Imagination will never be able *per ſaltum* to conceive actually Infinite, nor without an Image of Exiſtence to conceive that which actually is not.

Therefore it ſeems to me to be too precarious an Argumentation againſt the ſtrong evidence of Reaſon, to prove the exiſtence of an infinite Space or infinite Body, barely by bold affirming it; or becauſe a man's Phantaſie, or Imagination, or Intellect being accuſtomed to the knowledge only of things extended and real ſpace, cannot deliver it ſelf from the thought of an imaginary ſpace or extent, though there were nothing in the World to ſuſtain it.

And upon this account a late Excellent Author hath uſed a very incongruous *medium* to prove a moſt certain and important Truth, namely, the exiſtence of God, becauſe there was really a Space before the World was created: Whereas firſt of all, there could be no Space without a Body; and ſecondly, if there could be ſuch a Space, it were of a diviſible exiſtence, which could hold no proportion with the indiviſible nature of the glorious God; Space being *quid extenſum*, and diviſible; but the Eſſence of God purely ſpiritual and indiviſible, and equally immenſe, whether there were a World or no World, Space or no Space.

4. The Fourth *Objection* is this: That it ſeems that it is not inconſiſtent that one Infinite ſhould be larger than another, and yet both infinite: Inſtances may be given of two kinds; 1. One Infinite in Intenſion may be larger than another; there are degrees of perfection in Created Natures, a Brute is more perfect than a Vegetable, and a Man more perfect than a Brute; and an Angel more perfect than a Man, and one Angel more perfect than another, at leaſt gradually; and conſequently the Perfection of Almighty God muſt more infinitely exceed the perfection of a Man than it doth of an Angel, and more infinitely exceed the perfection of an Angel of an inferiour Order than an Angel of the ſupremeſt Order, and yet He infinitely exceeds the perfection of the moſt perfect Angel. 2. In Extenſion, or ſomewhat analogal to it: Certainly the the Eternal God had an eternal duration the firſt moment that he had Created the World as he hath now, and yet with Humility and Reverence in ſo great a Myſtery, we may ſay, and that truly, that he hath endured at this day above five thouſand years longer than he had endured

at the Creation of the World: ſo that it is not repugnant to the nature of Eternity to be longer or ſhorter.

I anſwer, That for the obviating of this difficulty I have willingly declined that Inſtance againſt the eternal ſucceſſion of Mankind that purely conſiſts upon the account of additional acceſſions to the latter end, as I may call it, of Eternal Duration.

But firſt, I ſay that this anſwers not at all the Reaſon given, the ſtreſs whereof reſts not upon the incompetibility of an exceſs of one Infinitude above another either in Intenſion or Extenſion, but the incompetibility of any multitude to be infinite; becauſe it is impoſſible that any number or multitude can be infinite if there can be another multitude or number given that exceeds it, which will fall out in the ſucceſſive Individuals and Generations of Men: But the glorious God, as he is moſt ſimply and indiviſibly One, and all his Perfections eſſentially and indiviſibly the ſame with his moſt One and indiviſible Being; ſo the infinite exceſſes both of his Eſſential Perfections and of his Eternal Duration beyond all other Beings, are not meaſurable by multitude or number of degrees or ſucceſſive moments, which would in it ſelf imply either parts or diviſibility, but exceeds them all by an infinite interval that neither hath nor can have any bounds or limits: As his Perfection is infinitely greater than the perfection of a Man, ſo it is infinitely greater than the perfection of an Angel; and were it not infinitely greater than the perfection of an Angel, it could not be infinitely greater than the perfection of a Man, becauſe the intenſive diſtance between the perfection of an Angel and of a Man is but finite: And therefore though that interval between an Angelical and a Humane perfection be ſubducted out of the extent of the Divine Perfection, ſtill the extent of the Divine Perfection is infinite; for what is ſo ſubtracted or ſubducted out of the extent of the Divine Perfection, leaves ſtill a Quotient, if I may ſo call it, Infinite.

Secondly, That which gives a clear Anſwer to the Inſtance is this: The Perfection of Almighty God is a Primitive Eſſential Perfection, antecedent to all created perfection; and all created perfection is a perfection indeed given by the glorious God, according to ſuch meaſures and degrees as he is pleaſed to beſtow: But as it is a derivative perfection, ſo it is a diſtinct kind of perfection from that which is in God, and of another nature, and makes no alteration in the Divine Perfection, nor borrows any of it: The glorious God was equally perfect before a Brute, or a Man, or an Angel, or a World was created, as he was after; and the production of Creatures of various degrees of eſſential perfection contributes nothing to it, nor takes any thing from it, nor makes any alteration in it: only it gives a new or farther relation from the Creature new created unto the Creator, and that in thoſe various ranks or degrees of perfection is indeed diverſified by diſparity in the Creatures themſelves, and in that comparative preference that one hath above another; but ſtill it is without and below the eſſential infinite Perfection of God, and doth no way affect or alter it. Take this Example in ſome meaſure to explain my meaning; I have a Rod of ſix foot long in my Hand, I take another Rod of four foot, another of two foot long, and apply them to my Rod of ſix foot long; I thereby find that my Rod of four foot takes up a greater ſpace upon my Rod of ſix foot than that of two foot, yet it

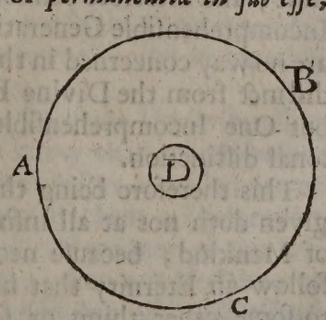
makes

makes no alteration in my Rod of six foot, but that continues of the same length as before, only by the application of the shorter Rods to it there ariseth a new relation, or rather variety of comparison between the Rod of six foot and the other Rods. Thus the Divine Perfection is primitive, absolute, unchangeable; and when a Man is created, there is a Creature made that hath a perfection greater than a Brute, and when an Angel is created, he hath a perfection greater than a Man, and thereby comes in a nearer degree or likeness of perfection to the Divine Excellence than a Man doth; but yet it doth not at all alter that Perfection that is primitively and essentially and infinitely in Almighty God, but is a perfection of quite another kind as well as degree.

And upon the same account it is, that although the extent of the Divine Duration is now greater than it was five or ten thousand years since, yet the duration of the Divine Existence was no less infinite ten thousand years since than it is now; because the duration of ten thousand years is but finite, and therefore though taken out of an infinite duration, leaves still the duration infinite; for finite taken out of infinite, leaves still that which remains infinite.

Besides, the duration of the glorious God is the duration of such a Being as is indivisible, and as he hath no divisibility in himself, so neither is his Eternal Duration divisible into parts.

It is true, that when his own Power hath produced a World, and with it Motion, he coexists with that Motion and successive Duration of created Being, which is little else besides a relation to the things existing: And therefore he cannot be said now to coexist with that which yet is not, but shall be, because the coexistence with any thing imports an existence of both the terms of that relation: And although by reason of that relation to Beings that are successive and have succession of parts, as Local Motion, or successive Generations; it seems to us that he hath a kind of succession in his duration, yet most certainly the existence of a divisible succession in created Beings doth no more make his duration successive than if nothing had been besides himself: As the unsuccessive duration of Almighty God with relation to himself, which is the *modus existentiæ divinæ*, doth not communicate unto Motion or other created Being the same manner of duration which is appropriate to the Divine Existence; so neither doth the existence of Motion or created Beings transfer to the Divine Being such a kind of duration as is proper to them, namely, a divisible successive duration consisting of successive and innumerable parts: For, as I before have observed, the duration of every thing, which is only the mode of its existence or *permanentiæ in suo esse*, is diversified according to the nature of the existence thereof. And though by reason of the coexistence of one thing with another there ariseth a various relation or connotation between them, yet it alters not that intrinsecal manner of duration that is appropriate to the Essences of the things themselves.



If we should suppose the Circle *A B C* to move about a fixed unmoveable Center at *D*, whereby the part that is now in *A*, an hour

hence will be at *B*, and an hour after that at *C*, and thereby is gained ſucceſſively different relations of ſite or poſition between the fixed or ſtable central Body at *D*, yet it is without any variation either of *ſitus* or motion in the central Body at *D*, which all this while reſts unmoveable, and keeps the ſame unaltered ſite or poſition in it ſelf: So it is in the coexiſtence of ſucceſſive Beings with the indiviſible, fixed, permanent ſtate of the glorious God.

But in all this there is nothing that anſwers or weakens the Reaſon before given againſt the Eternity of ſucceſſive Generations or Individuals, which is not upon this account, that that which is eternal cannot be extended to a greater extent at the hithermoſt and concluding extreme, as I may call it, for at the hither end it is *quaſi quid finitum*; but that thoſe Beings that muſt by their ſucceſſive exiſtence *excreſcere in multitudinem ſive numerum*, cannot be eternal upon a certain intrinſick incongruity between Multitude and Number of the one part, and Infinite of the other part: But in the eternal duration of the glorious God there is neither Multitude, nor ſo much as Succeſſion. And this is my ſecond Anſwer.

3. My third Anſwer is this: That although it may be, and certainly is conſiſtent with an eternal duration, that it may be ſhorter, or it may be longer upon the hither end thereof, namely, that extreme wherein it is finite, as is before ſhewn; yet it is impoſſible to be conſiſtent with the very notion of an eternal duration to be longer or ſhorter, *à parte ante*, in the extreme or remote part thereof, as I may call it; for upon that Suppoſition it ſhould be *utrinque clauſa*, terminated in the moment wherein I write, and terminated or limited by an antecedent being or duration of ſomething elſe: (With Reverence be it ſpoken) If any thing in the compaſs of Nature might bear an eternal Creation, yet if that Creation were but a moment after the Divine Exiſtence, that created Being could not be eternal becauſe it had a pre-exiſtence of the Divine Being before it: Nay, though I uſe the expreſſion of an antecedent moment to render my conception, yet that very imaginable moment muſt be an infinite duration antecedent to that created Being; and it could not poſſibly be otherwiſe; for if it were poſſible to be otherwiſe, it would conſequently deny the Eternity of God himſelf: for that created Being being impoſſible to be eternal, ſince it muſt, *ex ſuppoſitione*, have a pre-exiſting moment of the Divine Exiſtence, if that *mora præ-exiſtentiæ divinæ* were not eternal, but a moment, or any limited duration leſs than eternal and infinite, it would be but an addition of a limited time to a limited or non-eternal time; and therefore cannot be eternal (and here by the way, the Eternal, Incomprehenſible Generation of the Son, and Proceſſion of the Holy Spirit are no way concerned in this Diſpute, which are not created Beings, nor diſtinct from the Divine Eſſence, or eſſentially diſtinct from one another, but One Incomprehenſible God Bleſſed for ever) though under a perſonal diſtinction.

This therefore being the true ſtate of the matter, the Reaſon herein given doth not at all infirm the important Reaſon againſt the Eternity of Mankind, becauſe neceſſarily there would upon ſuch a Suppoſition follow an Eternity that had a beginning, an Eternity that was puiſne to ſome other thing or ſome other Eternal: And that although that duration

duration which is infinite in one extreme; namely, *à parte ante*, and finite at another extreme, namely by the present time, may have an increase, accession, or addition in that part in which it is finite; yet it is impossible that it should have any thing before it in that extreme wherein its Infinity and Eternity consisted. This is the chief stress of the former Debate, which is no way impugned by the Instance here given; for the glorious God and his Eternal Existence is such, that it hath not, cannot have any thing antecedent to it; neither is it measured by successive parts, but is simply eternal, infinite, before all things, without beginning of Being or Duration as well as without end; and such a Duration, as it is impossible to suppose any thing before it, or any thing equally ancient to it; but ever was, and ever had Being or Existence, that is, eternally and immutably the same; what once he was he ever was, still is, and ever shall be.

5. A Fifth *Objection* is this: That because we have formerly supposed that nothing can possibly be eternal, and together with it have variety of Operations. The glorious Eternal God hath variety of Operations in all the Works of Creation and Providence, his emanant Actions; and also in the Counsels and Determination of his Will, his immanent Actions: And therefore the Position seems to be derogatory to the Eternity of Almighty God.

I had not inserted this *Objection* but for the fuller vindication of the Truth, and to shew, that it no way in the least imaginable degree derogates from the Truths concerning God.

I therefore answer, that when we are speaking of alterations or changes, it may reasonably be supposed to be one of these kinds.

1. An alteration that with it carries a change of the Nature or Essence of a thing; and thus in a large sense generation or corruption, or the essential change of any thing or Being into another thing; thus corporeal Matter under any determinate form is changeable, and such a mutability is impossible to be consistent with Eternity: and it is thus impossible for the glorious God to be subject to any change, for he necessarily and therefore eternally exists, and must ever exist.

2. An alteration of states or conditions of any Being, which yet as to its essential condition persists as before: thus Bodies are every moment changed, sometimes in quality, as from hot to cold, sometimes in figure, sometimes in dimensions, as the motions of augmentation and diminution: a Child grows unto the stature of a Youth, and then of a Man; and such Beings as these cannot sustain an eternal duration, *à parte ante*: and in this respect the ever-glorious God is perfectly unchangeable, without so much as a shadow of change, but eternally and immutably the same.

3. A change of the internal and immanent acts of the Understanding and Will in a Being endued therewith; as to know that which before it knew not, to will, purpose, or determin what before it willed not or purposed not. The Schoolmen are indeed many of them a Generation of Men that think they can give an estimate of the manner of the Divine Operations, even those that are immanent, when yet God knows 'tis more possible for the Infant of a span long to discern and understand

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and define and determin the moſt ſublime and abſtruſe Notions of the moſt Seraphical Doctor, than for ſuch a Doctor to give an eſtimate of the hidden Operations of the Divine Intellect and Will: And therefore they are too bold to adventure upon ſuch determinations touching theſe Operations of the glorious God; and in the upſhot arrive at nothing touching them but preſumptuous, uncertain and dangerous Speculations: and it muſt needs be ſo, for as the Heavens are higher than the Earth, ſo and much more are the thoughts of the unſearchable God higher than our thoughts. The more ſober and weighty part of the Schoolmen do conclude this Queſtion in the negative, and aſſert, That Almighty God by one eternal act knew all things from all Eternity, and by the like eternal act willed from all Eternity what he any way willed; and though the termination of that Will reſpected Objects that neither were nor could be eternal, yet his Knowledge and Will was eternally the ſame as ever; and he begins not to know any thing which he did not eternally know, nor to will any thing which he did not eternally will, though the execution of that Will reſpects things to be done in time and futurity. And certainly as this is the moſt probable Opinion, ſo it takes away the pretence of the Objection; the immanent Acts and Operations of the glorious God being eternal and without change.

It is true, ſome late Schoolmen, and after them *Clara* in his 4th *Problem* ſeems to aſſert, that, *Divina voluntas poteſt velle aliquid novum ſine mutatione ſui.*

But ſuppoſe that this Suppoſition were admiſſible, yet this would not any way be inconſiſtent with the Eternity of the Divine Nature and Eſſence: 1. This is no Phyſical change in Almighty God, but a voluntary and free operation of his Will, which poſſibly was ſo at firſt willed by him to be changed according as he ſaw cauſe in his infinite Wiſdom. 2. That this which is here called a change of his Will, is not in truth a change of his Will, but a change in the Object, which only ſeems to make a diverſification of the Will, but indeed is the ſame Will diverſified only in the habitude to the Object. The Will of God is like a ſtraight unalterable Rule or Line, but the various comportments of the Creature either thwarting this Rule or holding conformity to it, occaſions ſeveral habitudes of this Rule unto it. We need no better explication hereof than that of the Prophet *Ezechiel*, Chap. 33. from the twelfth to the twentieth Verſe.

4. A change of Actions and Operations in relation to ſome external Object, or terminated therein; and ſuch a change as this is conſiſtent with an Eternal Being, though the change happen in any given portion of Time: Thus the Almighty and Eternal God created the World by his Power and Will in the beginning of Time, and orders, governs and diſpoſeth of the things by his Providence in all the Periods of Time, and yet without any Phyſical or real change in himſelf. And thus he began to be a Creator, when before he was not a Creator; and began to be a Governour of the World after it was made, and exerciſeth divers external acts of his Providence daily which before he did not. For thoſe various acts of his are terminated in ſuch Objects as neither were nor could be eternal, namely, the World and the Government thereof: And although he thereby gain a change of relation or relative denomination,

nation, yet it is no real or Phyſical change in himſelf. For all relations ariſe from the ſuppoſition of exiſtence of both the terms of relation, as between the Creator and the thing created, and the Governour and thing governed; and therefore although one of the terms of that relation, namely the Eternal God, had an eternal exiſtence in his own abſolute nature; yet the World, that was the other term of relation, had no eternal exiſtence, but was created in the beginning of Time, and the relation of a Creator or Governour muſt neceſſarily therefore ariſe in Time, and not from Eternity, becauſe one of the terms of the relation, namely the World, had not any exiſtence before Time began.

But in the eternal Generation of the Son and Proceſſion of the Holy Spirit, the *termini relationis* were all eternal, and conſequently the relation of Paternity and Filiation between the Firſt and Second Perſon, and the relation between the Sacred Perſons of the Trinity and the denomination thereof muſt needs be eternal, becauſe the terms of relation between whom that relation ariſeth were eternal: But it is not ſo between the Eternal God and a temporary World, for the relation could not ariſe till the World had an exiſtence; and a change or acqueſt of a new relation is not at all any real change in God, but is an accident reſulting from the exiſtence of both the *termini*, and can be no ancienter than the coexiſtence even of the lateſt and neweſt of thoſe terms, which if began in time muſt neceſſarily produce a new relation, yet without any real change in the pre-exiſting and eternal God.

And thus I have done with thoſe Phyſical and Metaphyſical Evidences of the Inception of the World and of Mankind, and againſt the Eternity of both. And although I ſhall deſcend in the enſuing Section to Moral Evidences of probability ſtrongly perſwading the ſame Truth, yet I lay the principal weight and ſtreſs of this Argument upon what is ſaid in the preceding Chapters of this Firſt Section, which though perchance they may have ſomething of obſcurity, as being bottomed upon and fetched from the true nature of the things themſelves, and therefore not ſo obvious and plain to all Capacities, yet they have a concludency in them not inferior, or at leaſt little inferior to Demonſtrations.

SECT.

SECT. II.

CAP. I.

The Proofs of Fact, that seem with the greatest Moral evidence to evince the Inception of Mankind: And first, touching the Antiquity or Novity of History.

I Have now done with those Evidences that in my Understanding seem, *quasi ab intrinseco*, to evince the Inception of Mankind from that intrinsecal incompossibility and inconsistency that the Supposition of the eternal existence thereof bears with his Nature: I now descend to the examination of those Evidences of Fact, which do or may seem to contribute to the proof of what is designed, namely, *Novitatem generis humani.*

And although that Evidences of Fact of things remote from our Sense cannot be said infallible and demonstrative, because the nature of such matters of fact (simply as they are matters of fact) is not capable (as such) of Demonstration; yet they may be Evidences of high credibility, and such as no reasonable Man can with any just reason deny his assent unto them.

That which hath been, hath as certainly and infallibly, yea and as necessarily been, as that which is: *Omne quod est, dum est necessariò est, & omne quod fuit, cum jam preteriit necessariò fuit quando fuit, & in præteritis non est contingentia.* Only that which is, and is obvious to Sense, hath this advantage of evidence which that which hath been wants, namely, the immediate evidence of Sense, wherein though it is not universally impossible but that Sense may be deceived, yet because it is the best evidence that we have of matters of fact, we give credit to it as a sensible evidence, and we have reason so to do.

But of things transacted before our time, and out of the immediate reach of our Sense, we may have such an evidence as in reason we ought as reasonable Men to acquiesce in, though the evidence be still in its own nature but moral, and not simply demonstrative or infallible: And the variety of circumstances renders the credibility of such things more or less, according to the various ingredients and contributions of credibility that are concentred in such an evidence.

It is impossible to demonstrate by evidence infallible (or which is all one, by evidence that is impossible to be false) that there was such a Man as *Julius Cæsar* or *Augustus*, that there was such a Man as *William* the Conqueror, or King *Henry* the Eighth, or that such a Man was his Father, or such a Woman his Mother; or that there is such a City as *Venice*, or *Rome*, (to me that never saw it,) for all these I have but by relation from others, and it is not impossible but those Histories or informations or relations by which I am informed of these things may be false: And they

they are such matters as have in them a less evidence than my own Sense of Sight; for the evidence of my Sense is simple and immediate, and therefore I have but a shorter cut thereby to the assent to the truth of the things so evidenced: But in things that I have by relation from others, my evidence is of greater distance; for first, I see them not by my own Eyes, but it is others that must first see the thing they relate; and secondly, though I should think that whatsoever might be believed, if obvious to the Sense of others, might have as great a credibility as if obvious to my own, yet I must have a second postulation that must have an ingredient to elicit my assent, namely, the veracity of him that reports and relates it. And hence it is, that that which is reported by many Eye-witnesses hath greater motives of credibility than that which is reported by few; that which is reported by credible and authentick witnesses, than that which is reported by light and inconsiderable witnesses; that which is reported by persons disinteressed, than that which is reported by persons whose interest it is to have the thing true, or believed to be true; that which hath the concurring testimony of real existing monuments, than that which is without them; and finally, that which is reported by credible persons of their own view, than that which they receive by hear-say from those that report upon their own view: So that it is not with Evidences of Fact as it is with Logical or Mathematical Demonstrations, which seem to consist in indivisibles, for that which thus is demonstratively true is impossible to be false; but Moral Evidence is gradual, according to the variety of circumstances. Yet such a man would be exploded as an irrational man, that will not believe there was such a man as *Julius Cæsar*, because the Historians that write of him might possibly conspire to deceive the World with a Romance, or that the Books may be suppositious or corrupted; or will not believe that such a Man was his Father, or such a Woman his Mother, because he might be suppositious; or will not believe there is such a City as *Rome*, which he never saw, because Travellers are wont to love to tell strange things, and so may many as well as one.

So that as eternal Truths may have one kind of certainty by Logical Demonstration, and as Mathematical Conclusions have an infallible certainty by Mathematical Demonstration, and as matters objected immediately to our Sense have another kind of certainty by sensible evidence, so matters simply of fact not objected immediately to our Sense have another kind of certainty, though not altogether equal to the former, nor simply infallible, yet so highly credible that may justly elicit the assent of reasonable men, and such as is proportionate to the nature of the thing, and therefore more cannot be reasonably expected for the proof of the fact.

In the pursuance of this Argument, namely, Evidences of Fact touching the Origination of Mankind, I must therefore say that the Evidences thereof are not of an infallible certainty, and so much the rather because it relates to a matter that at the neareſt that can be supposed is near six thousand years distant from us, and some suppose more; therefore the Evidences of Fact are as it were percolated through a vast Period of Ages, and many very obscure to us. And therefore all Proofs of this kind except that of Divine Revelation (which though true, and infallibly true,

we muſt not by the Laws of Argumentation bring in here, becauſe at one word it determins the Queſtion) will ariſe to no higher than Moral, and therefore fallible in their own nature. We reſt upon what hath been before ſaid for Evidences and Reaſons, that to me ſeem demonſtrative.

But yet the Evidences of Fact which we ſhall produce muſt be conſidered alſo with theſe Advantages for their credibility.

1. They are ſuch as bear a great congruity and conſonancy with, and ſubſervience to thoſe former Arguments that *ex natura rei* and *intrinſecè* prove an impoſſibility of an eternal duration of Mankind, *à parte ante*, which though it doth not, cannot evince that Mankind muſt have their Origination or Beginning *in hâc vel iſta hora*, yet they do evince that Beginning it muſt have, and the evidences of fact are as ſo many *teſtes*, *conteſtes*, or *ſuffragiales*, that bear witneſs to that Truth that the former ſort of Arguments do plainly evince.

2. Though theſe Evidences of Fact taken ſingly and apart, are not without their Objections that may ſeem to weaken them, yet *juncta juvant*: That evidence at Law which taken ſingly or apart makes but an imperfect proof, *ſemiplena probatio*, yet in conjunction with others grow to a full proof, like *Silurus* his twigs, that were eaſily broken apart, but in conjunction or union were not to be broken.

Truths (eſpecially of Fact) are not made Truths by Arguments or Evidence: If there were once ſuch a man as *Cæſar*, it is moſt certainly true that he was, though no Hiſtorian ever mentioned him; and therefore if there were ten thouſand Authors that mention him kept ſacredly and inviolably in certain Archives unto this day, all this evidence doth not make him to be, but only gives us a light and evidence of great probability that he was: The Stars in the Milky-way, and thoſe *Aſſeclæ Jovis* are not therefore in the Heavens or *Æther*, becauſe the Teleſcope hath diſcovered them, for they were there before; but the poſition of thoſe Glaſſes preſent them to our perception, and evidence their being, which cannot be diſcovered without them.

And ſo it is with Evidences of Fact, they do not make the thing to be, but evidence them to be; and becauſe if to any one *quæſitum* of fact there be many but probable evidences, which taken ſingly have not perchance any full evidence, yet when many of thoſe evidences concur and concenter in the evidence of the ſame thing, their very multiplicity and conſent makes the evidence the ſtronger; as the concurrent teſtimonies of many Witneſſes or many Circumſtances even by their multiplicity and concurrence make an evidence more concludent.

Now theſe Evidences of Fact I ſhall caſt into theſe ranks.

1. We have no authentical Hiſtory of former Ages extant, but what hath been written within the compaſs of four thouſand years.

2. The ſubject matter of thoſe Hiſtories give us no account of the Original of great Monarchies, Kingdoms, or Commonwealths, but what appear thereby to have begun within the compaſs of about five thouſand years.

3. The original Invention and Inventors of moſt conſiderable Arts had their Origination, as far as we can find, by Monuments of ancient times, within the compaſs of about ſix thouſand years.

4. The

4. The Original of the *Apotheoſes* of moſt of the Heathen fictitious Deities appears by the ancient Monuments of former times to have had their beginning within the compaſs of five thouſand years.

5. The moſt authentick Hiſtories and Monuments of Antiquity give us an account of the firſt Fathers, or *Capita familiarum*, and of the Plantation of the known Parts, Continents and Iſlands of the World within the compaſs of five thouſand years.

6. The Inhabitants of the World do daily increaſe, and their increment ſurmounts daily their decreaſe; which could not be, unleſs the World of Mankind had their original within ſome proportionate time, and could not conſiſt with ſuch a vaſt exceſs of duration which ſome would aſſign, much leſs with an eternal duration, or ſuch as never had a beginning.

7. There hath in all Ages, and among all People been a conſtant tradition retained and believed, touching the Origination of Mankind *ex non genitis vel per generationem propagatis.*

Theſe are the Heads of thoſe Evidences of Fact which I ſhall uſe in this Argument touching the Origination of Mankind, whereunto poſſibly other occaſional Topicks of the like nature may be added.

And touching theſe Evidences of Fact, this I ſhall ſubjoyn.

1. That I do not lay the weight of this Argument upon thoſe Evidences of Fact, becauſe they have or may have their ſeveral allays and fallibilities, which I ſhall impartially ſubjoyn to every particular Topick.

But I lay the weight of the Argument upon what hath been before ſaid, which to me ſeems to be little leſs than demonſtrative, drawn from the intrinſick nature of the thing, and from that abſurdity which would ariſe upon the Suppoſition of the Eternity of Mankind, and the incompoſſibility of an eternal duration, *à parte ante*, to ſucceſſive Natures.

2. That although ſingly and apart theſe Evidences of Fact are not ſo concluſive but have their allays and exceptions, yet they have theſe advantages that advance their evidence, as very credible; 1. In that the Suppoſition which they are produced to prove, is not impoſſible to be true: 2. That there is nothing of probability of Reaſon or Inſtance that can be produced againſt the truth of that Suppoſition which is contended to be proved by them: 3. They have ſo much the more weight and evidence, in that they do ſuffragate and bear witneſs to the truth of that Suppoſition (namely, the Inception of Mankind) which holds ſo great a congruity with the intrinſick reaſon and nature of the thing, the contrary whereof, namely, the Eternity of Mankind, is apparently contradictory to a ſtrict and true reaſon.

3. That although theſe Evidences of Fact, taken ſingly and apart, poſſibly may not be ſo weighty, yet the very concurrence and coincidence of ſo many Evidences that contribute to the Proof of the thing deſigned, carries with it a great weight, even as to the point of Fact: it is not probable that that Suppoſition ſhould be falſe which hath ſo many concurrent Teſtimonies bearing witneſs to it: And therefore although I ſhall impartially ſubjoyn thoſe Allays and Abatements which may be brought againſt the ſeveral Inſtances, whereby if ſingle, they might ſeem of leſs weight and moment; yet I do not thereby take off that Evidence

which in conſort and conjunction they give to the truth of the Suppoſition intended to be proved by them.

4. That it cannot be expected in an Argument of this nature, which is touching a matter of Fact, that Evidences of Fact can be no more than topical and probable; and therefore though there may be Allays and Abatements that may take away a neceſſary or infallible concludency in theſe Evidences of Fact, yet it is ſufficient that they be probable and inductive of Credibility, though not of Science or Infallibility. *Ariſtotle*, as I remember, in the beginning of his *Politicks* tells us that all Truths have not the ſame kind of Evidence, neither indeed can have, and therefore it is unreaſonable to expect ſuch an Evidence as the thing cannot poſſibly bear, though it be a real Truth.

5. That among theſe Evidences of Fact, though all contribute to the Proof of the Suppoſition, yet the three laſt ſeem to be of that nature that they are of greateſt weight, and leſs ſubject to exception.

6. That in as much as in this Argument I deſign only the uſe of Reaſon and Reaſonable Evidence, and endeavour to make my Suppoſition evident to Reaſonable Men as ſuch; I do not therefore make uſe of the divine and irrefragable Authority of the Holy Scriptures: For they that ſubſcribe to the Infallibility and Divine Authority of them, need none of this Method of Ratiocination that I uſe to prove this Suppoſition of the Origination of Mankind, which is ſo plainly and diſtinctly delivered in the Holy Scriptures; and therefore where I have recourſe to the Holy Scriptures, I uſe it but as a Moral Evidence, a Hiſtory highly credible; and I demand of my Readers this equal Juſtice, That he would at leaſt give it that credit that the Antiquity, Congruity, and Moral Evidence of it deſerves, which certainly would be much more than what the moſt do ordinarily allow to the Hiſtory of *Thucydides*, *Herodotus*, *Livy*, *Tacitus*, *Manethon*, *Xenophon*, *Cteſias*, or *Beroſus*.

7. Though in this large Diſcourſe I may ſeem to loſe time by proving of that which is not queſtioned by ſober Men, that in a laborious Diſcourſe of this nature I do rather raiſe a Queſtion that would be at quiet if let alone, at leaſt I loſe time, and, *magno conatu nihil efficiam*; yet I hope in the Concluſion it will be of uſe to confirm our Faith, to magnifie the value of the Holy Scriptures, and to give ſome ſtop to thoſe *Atheiſtical* and *Epicurean* Opinions that begin more than formerly to obtain in the World.

CAP. II.

Concerning the firſt Evidence, the Antiquity of Hiſtory, and the Chronological account of Times.

BUT before I begin, I ſhall prefix a ſhort Chronological Scheme of Times, to which I ſhall have occaſion oftentimes to refer; wherein I ſhall not be over-ſollicitous for great curioſity or exactneſs. For although there is ſcarce any one Chronological Writer that differs not from another in the preciſe connexion of Times and Things, yet there will

will be certainty enough for my purpose, if I take so much out of them wherein they do in substance agree, though they differ in their particular Account.

And although the Account of the Years of the World according to the *Seventy*, do seem more useful to the solution of some difficulties in Chronology, who assign 2262 years from the Creation to the Flood; and from thence to the Birth of *Abraham* 1132 years; whereas the *Jewish* Account assigns for the former Period 1656 years, and for the latter 292 years. So that according to the *Seventy*, from the Creation to the Birth of *Abraham* were 3394, but according to the *Jews* only 1948 years; yet I shall rather choose to follow the *Jewish* Account, and take *Helvicus* Abstract for my little, small Chronological Table.

Anni Mundi.	JUDAICI.	ASSYRII.	ARGIVI.	ÆGYPTII.	ATHENIENSES.	HISTORICI.
1656	*Diluvium.*					
8171		*Belus.*				
1771		*Ninus.*				
1823		*Semiramis.*				
1870		*Ninus, Sardanapalus.*				
1948	*Abraham natus.*					
2093			*Inachus.*			
2123	*Abrahami mors.*					
2149			*Phoroneus, Regnante in Attica Ogyge, & intra annos Phoronei, diluvium Ogygium.*			
2200			*Apis.*			
2210				*Ægyptiorum dynastia: Themosis.*		
2220	*Joseph in Ægypto.*					
2235			*Argus.*			
2360						*Promethei seculum.*
2373	*Moses natus.*					

Anni

Anni Mundi.	JUDAICI.	ASSYRII.	ARGIVI.	ÆGYPTII.	ATHENIENSES.	HISTORICI.
2430					*Athenienſium dynaſtia prima: Cecrops.*	*Deucalionis diluvium.*
2450	*Exitus ab Ægypto.*					
2475			*Danaus.*			
2490	*Joſhua dux.*					*Ganymedis raptus.*
2573						
2669			*Cadmus è Phœnicia in Græciam migravit.*			*Hercules Amphitryonis filius.*
2710						*Argonautarum expeditio.*
2750						*Bellum Trojanum, & Trojæ excidium.*
2850						*Reditus Heraclidarum.*
2905	*David Rex Iſraelis.*					*Ionica migratio.*
3000						*Homeri ætas.*
3060	*Athalia & Joas.*					*Lycurgus legiſlator.*
3175	*Uzziah.*					*Olympiades incepti.*
3195						*Roma condita.*
3325						*Solon & ſeptem ſapientes.*
3391						*Pythagoras, Cyrus.*

Having premiſed thus much touching the Chronological Account of ſome Times and Things paſt, without confining my ſelf to the exactneſs of Years, and with omiſſion of many things happening in theſe Periods; I ſhall now proceed with the firſt of my Inſtances, namely, touching the Hiſtories of former Ages, and their Antiquity; reſerving tho

the matter of their Hiſtories, and what may be collected from them, to the enſuing Chapters.

Thoſe Nations whoſe Hiſtorians put fair for the greateſt Antiquity, are the *Romans*, *Grecians*, *Perſians*, *Aſſyrians* or *Babylonians*, *Egyptians*, and the *Jews*: of all theſe there is ſomething extant.

As touching the *Chineſes* and their long derived Annals, there is much ſpoken by report or relation, but nothing authentick thereof is extant to the common view but ſome ingenious yet uncertain Collections out of *Martinius* by Mr. *Webb* in his Eſſay touching the Primitive Language; *Voſſius*, and ſome others: and therefore I ſhall ſpare any thing touching them.

Firſt touching the *Romans*, though there were many Monuments of Antiquity preſerved in writing among them, as appears by their Laws of Twelve Tables, their *Faſti Conſulares*, the Tranſcripts whereof are extant to this day; yet we cannot expect ſo much Antiquity of Hiſtorians and Writers among theſe, as we may among other People of greater Antiquity; ſince the firſt Foundation of their City was ſome time after the *Olympiads* began, *viz.* in the 7th *Olympiad*, and about the year of the World 3190.

The *Grecians*, whoſe Monarchy preceded that of the *Romans*, have more ancient Hiſtorians than the *Romans*: And not to reckon up their Philoſophers and Poets, that applied not themſelves to Hiſtory, I ſhall only mention theſe that follow: *Xenophon*, that lived about the 97th or 98th *Olympiad*; *Thucydides* and *Herodotus*, who lived about the 85th or 88th *Olympiad*; but he among them of greateſt note and antiquity was *Homer*, who wrote the Hiſtory of the *Trojan* War; touching the time of his life and writing the Chronologiſts agree not, ſome making him 200 years after the Deſtruction of *Troy*, ſome more, ſome leſs; but all placing him before the firſt *Olympiad*, and after the Deſtruction of *Troy*, thoſe two famous *Epochæ* among the *Greeks*.

This is the ancienteſt Poetical Hiſtorian that is extant among the *Greeks*, although it is not unlike that many were more ancient among them, as is mentioned by *Tatianus* in *Euſeb. præparationis lib.* 10. as *Linus* the Tutor of *Hercules*, *Amphion*, *Orpheus*, *Muſæus*, and ſome others; yet we have little extant of them but Poetical Raptures and Fictions, and thoſe alſo but in fragments and pieces traditionally preſerved in ſubſequent Authors.

Among the *Perſians*, though their Monarchy were more ancient than that of *Greece*, yet we have leſs extant of Hiſtorical Writings concerning them; the ancienteſt that I have heard of is that of *Xenophon*, though a *Grecian*, and *Cteſias*, who is ſuppoſed to have lived contemporary with *Xenophon*; *Megaſthenes*, a *Perſian* Hiſtorian about the 120th *Olympiad*, out of whom *Abydenus* that wrote touching the *Aſſyrians* and *Babylonians* extracted many things relating to the *Perſians*, as appears by his Fragments cited by *Euſeb. lib.* 9. *Præpar. ſect.* 41.

Touching the *Chaldean* or *Babylonian* Hiſtorians, though that Monarchy be extended to a vaſt Period by ſome of their ancient Hiſtorians, yet the ancienteſt credible Hiſtorians that we have concerning them are, *Beroſus* who lived about the 130th *Olympiad*, and *Abydenus* before mentioned: only it is reported by *Simplicius* out of *Porphyry*, that *Caliſthenes* one

one of *Alexander*'s Captains brought to *Ariſtotle* from *Babylon* a relation of their ancienteſt Aſtronomical Calculations, 1903 years before the Taking of *Babylon* by *Alexander*, which is ſuppoſed to be in the year of the World 3620 according to the *Septuagint*; which gives a probable conjecture of the Inception of the *Babylonian* Monarchy to be about 200 years before the Birth of *Abraham*.

Touching the *Phœnicians*, from whom it is ſuppoſed that not only Learning but Letters themſelves were brought into *Greece* by *Cadmus*; the firſt and ancienteſt Hiſtorian is ſuppoſed to be *Sancuniathon*, who is related by *Philo Biblius* according to *Euſeb. præpar. lib.* 1. *ſect.* 9. to have been before the Deſtruction of *Troy*, and very near the time of *Moſes*, and to have written a Hiſtory *à prima Univerſi molitione*, and that he ſearched many Monuments of Antiquity: The Writings of *Mercurius Triſmegiſtus* whom the *Egyptians* call *Thoth*, and the *arcana Ammoneorum volumina*, purged the Hiſtory of former times from Fables, and gave a full account of former Ages, whoſe Writings *Philo Biblius* tranſlated into *Greek*, and digeſted into nine Volumes, he gathered much from *Hierombal* the Prieſt of *Jao*, whom *Bochart* upon very probable reaſons ſuppoſeth to be *Gedeon* called *Jerubbaal*; and having ſet up an *Ephod* in his City, might be ſuppoſed a Prieſt, and from the intercourſe between them the Idol *Baal-berith* was brought from *Berith* the City of *Sancuniathon*, into *Judea*.

Touching the *Egyptians*, they pretended to the greateſt antiquity both of Government and Learning; the latter they principally derived from *Hermes*, ſtiled by ſome *Mercurius Triſmegiſtus*, and by the *Egyptians Thoth*; the *Phenicians* made claim to this man as theirs, attributed to him the Invention of Letters, of Navigation, of the Virtues of Herbs, *Euſeb. lib.* 1. *Præparat. ſect.* 10. *de Phœnicum Theologia*; he is ſuppoſed more ancient than *Moſes*, but we have nothing authentick exiſting which he wrote: The ancienteſt Hiſtorian of the Affairs of *Egypt* was *Manethes* the *Egyptian* Prieſt, who lived about, or as ſome think, before the time of *Alexander*, he carries up the *Res Ægyptiacas* to an exceſſive Antiquity, and yet with great particularity and pretended certainty: ſome account him fabulous, becauſe he carries up the *Egyptian* Dynaſties before the Flood, yea and long before the Creation; others aſſert the probability of the *Egyptian* Dynaſties to over-reach the univerſal Flood, but ſalve that prodigious exceſs of their numerous Years by reducing them to Months, or *Anni Lunares*, which were anciently ſo accounted among the *Egyptians*.

The *Egyptians* have had other Writers of their Hiſtories, but of a later date, as *Ptolemeus Mendeſius*, mentioned ſometimes by *Euſebius*; and thoſe *Arabick* Hiſtorians mentioned by *Kircher* in that Book that delivers the Hiſtory of the ſucceſſion of their Dynaſties.

Laſtly, I come to the *Jewiſh* Hiſtory begun by *Moſes*, and continued down in a clear ſucceſſion and *ſeries* of times till their return from the *Babyloniſh* Captivity and this Hiſtory hath a juſt prelation above all the Writings of other Hiſtorians in theſe enſuing reſpects.

1. It hath the greateſt and moſt particular certainty, and far beyond any of the Hiſtorians before mentioned; it contains the certain Periods of Times, Names, Men, Places, Actions, and all Circumſtances requirable

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in a History to inform; it is not involved in Mystical expressions or Mythologies, but is plain, familiar, and intelligible.

2. It hath the greatest evidence of Truth that can be expected by a reasonable man, namely, Evidence from it self, the particularity and circumstances of the things it relates; Evidence from the ancientest Heathen Authors, especially *Sanchuniathon*, *Berosus*, and *Abydenus* before mentioned; Evidence from the several parts thereof, the Book of one Age bearing witness to another; as the Books of *Joshua* to those of *Moses*, the Books of *Kings* to those of *Moses* and *Joshua*, though written in several Ages; *Evidentia rei*, or *facti*, there cannot be greater Evidence than the Regiment of a People for so many Ages according to the Laws given and recorded by their first Historian *Moses*, and the enjoyment of their Possessions according to the distribution of their next Historian *Joshua*.

3. It is no broken Piece, or Historical Fragment, but it is carried down from the beginning of Time to all the ensuing Ages of the *Jewish* State, without any *chasma* or interval.

4. It hath the evidence of the highest credibility that any thing of that nature is capable of, That the Books of *Moses* especially, which are the *Caput Historiæ Judaicæ*, were written by that Man *Moses*, and that he lived in that Age wherein he is supposed to write: 1. The constant uninterrupted Tradition of that Kingdom and Nation from it first coalition, even to this day. 2. The attestation of all the succeding Writers of that Historical *Series* of the *Jewish* Affairs. 3. The inviolable Observation of those Laws given by *Moses* and recorded in that History, as of the Laws given by him. 4. The Suffrage of all Heathen Authors both modern and ancient, that have occasion to mention the concerns of that People.

5. It is a History that contains matters of far greater moment and antiquity than any other Writers but such as in probability made their Collections out of it, namely, of the Transactions from the first Creation of the World until the Universal Flood, and from thence to the time of him that first wrote it, namely *Moses*.

6. It is a History that was really written by *Moses*, who was far more ancient than all the Heathen Writers above mentioned (excepting only *Trismegistus*, of whose Writings we have nothing extant) and more ancient than most of those Things or Notes recorded by those most ancient Heathen Writers which for the most part filled their Books: He wrote 540 years before *Homer*; 200 years before *Sanchuniathon*, according to *Bochart*'s account; 300 years before the Expedition of the *Argonauts*; 350 years before the *Trojan* War; and a considerable time before the *Apotheoses* or Inaugurations of many of the Heathenish Deities. So that as the Matter of his History, so the Time of his writing is far more ancient than the writing of the most ancient Heathen Historians that are at all extent. Much of this I shall have occasion to resume and enlarge in the ensuing Chapters, yet this was necessary in this place.

The Inference that is made from hence is, That probably if the World of Mankind had been Eternal, or if it had any such vast distance from its Beginning as some suppose, we should have had Historical Monuments and Writings long before the Age of *Moses*.

But for all this, I muſt needs ſay, this Conſideration ſingly (I ſay ſingly) taken and weighed, maketh not much againſt an eternal or at leaſt a vaſter *Epocha* of the firſt Origination of Man than is ordinarily ſuppoſed; I ſhall therefore ſet down thoſe allays that make againſt the ſtrength of the conſequence drawn from this Topick.

1. It is evident that the uſe of Letters and Writing were far more ancient than the time of *Moſes*; the *Egyptians* and *Phenicians* carry up the original of the invention thereof to *Mercurius Triſmegiſtus*, which is ſuppoſed long before *Moſes*: And although *Cadmus* is ſuppoſed to have brought the uſe of Letters out of *Phœnicia* into *Greece* ſome time after the Age of *Moſes*, according to *Polydore Virgil, lib.* 1. *cap.* 6. out of *Pliny, Herodotus* and others; yet it appears by what is before mentioned, that there were in *Phœnicia* very ancient written Volumes called *Volumina Ammonæorum* long before the time of *Sancuniathon*. And if we believe the Tradition of *Joſephus*, the Pillars of *Seth* were extant in his time; and according to *Tertullian* ſome Fragments of the Writings of *Enoch* were traditionally extant in his time: But howſoever *Moſes* (if he be the Author of the Hiſtory of *Job*, whom ſome think to be contemporary at leaſt with *Jacob*) mentions Books and Writings to have been common things in the time of *Job*, *Job* 19. 23. *Joſephus lib.* 1. *cap.* 3. *Tertull. de Habitu Mulierum.*

2. Surely if Writing were ſo ancient, it is probable that many Hiſtories might be before the time of *Moſes* which were loſt in ſucceſſion of time, as it muſt be agreed that moſt of thoſe ancient Monuments that in the granted Period of the World were extant before *Moſes* time are ſince loſt, and many millions of Books that have been written ſince *Moſes* time have by the injury of Time and Men been loſt; much more thoſe Books which were written antecedent to *Moſes* time: And the truth is, the preſervation of the Books of *Moſes* entire unto this day, when ſo many of a far later date are loſt, is to be attributed to the ſpecial Providence of Almighty God.

2. Again, they that aſſign the ſhorteſt time between the Origination of Mankind and the Writings of *Moſes*, allow it to be ſomewhat above 2460 years: So that although *Moſes* were admitted the firſt Hiſtorian that ever wrote, it would very near as ſtrongly conclude againſt the antiquity of 2460 years before his writing as againſt an eternal exiſtence of Mankind: if it ſhould be an Argument againſt the latter, it would be ſuch alſo againſt the former.

3. Conſidering the many mutations and caſualties of Wars, Tranſmigrations, eſpecially that of the General Flood, there might probably be an obliteration of all thoſe Monuments of Antiquity that immenſe Ages precedent at ſome time have yielded. *Cecrops* was contemporary with *Moſes*, and *Belus* and *Ninus* were before him; yet we have no Monuments extant of the *Aſſyrians* ſo ancient as *Belus*, or of the *Athenians* ſo ancient as *Cecrops*, but ſuch as are Traditions, and written long after their times. So that although I have mentioned this concerning the known Periods of Hiſtorical Writers, yet I think we are to be careful not to lay too great a ſtreſs ſingly on it, and it is the leaſt of all that follow in weight or evidence: And yet this was fit to be mentioned, becauſe it is neceſſary for the more clear diſcovery and application of that which follows.

CAP.

CAP. III.

The second Evidences of Fact, namely, the apparent Evidences of the first Foundation of the greatest and ancient Kingdoms and Empires.

I Come to my Second Evidence of Fact, which is the subject Matter of Histories, and principally concerning the Evidence arising from them of the first Original of the most considerable Monarchies in the World.

Touching the great Monarchies of the World, their Original is so well known, and delivered down to us from Authors of unquestionable truth, that there need little be said touching them; for they have their confessed *Epochæ* within certain and known Periods. As the beginning of the *Roman* Monarchy under *Romulus*, which gives the *Epocha Urbis conditæ* in the 7th *Olympiad*; the beginning of the *Grecian* Monarchy, which hath its *Epocha* in *Alexander* about the 111th *Olympiad*; the beginning of the *Persian* Monarchy, which had its *Epocha* in *Cyrus* about the 55th *Olympiad*, though the same were not established in the beginning of *Cyrus*, but completed in *Cambyses* his Son about the 62d *Olympiad*. And the like might be observed concerning several smaller Kingdoms, whose originals are delivered over to us in Histories.

And although it is true that these Beginnings of these several Monarchies and Kingdoms do not so begin as if those Men that founded these Monarchies were the natural Fathers of all those Persons that did *coalescere in Regnum vel Monarchiam*; or as if those Monarchies were derived from the Heads or Roots that gave them this denomination, as all Men are derived from the common Parent of Mankind, or as possibly some other of the ancient Monarchies, which we shall have occasion hereafter to mention, were derived: For many times the beginning of Monarchies and Kingdoms was by the coalition of many Persons, it may be of several Nations, into an Army, as they did under *Cyrus*, or into a City, as they did under *Romulus*, or by transmigration of Persons from one Countrey to another, as the *Israelites* did.

And therefore we are not to take it that these Originations of Monarchies were the Origination of all the People that were joyned in it; for they had their existence oftentimes before, and took their denomination from the *Dux Exercitûs* or the *Rector Civitatis*, under which they were as it were listed in their Civil or Military coalition.

And therefore the Argument is not thus necessarily that the *Roman* Monarchy or the *Grecian* Monarchy had not its beginning before such a time, therefore those Men that were the constituent parts thereof had no existence before that time; but that the Civil Society under the Prince, Rector or form of Government then began to be formally such in such a special Constitution.

But those Monarchies that pretend to the greatest Antiquity are principally,

1. The *Aſſyrian* or *Babylonian* Monarchy.
2. The *Egyptians*, and their Dynaſties.
3. The *Grecians*.
4. The *Chineſes*.

Theſe I ſhall examin in order.

1. Touching the *Aſſyrian* or *Babylonian* Monarchy, we do with the beſt authority both of Sacred and Prophane Writers ſuppoſe,

1. That it had its beginning ſince the Univerſal Deluge from *Ham* the youngeſt Son of *Noah*.

2. That the Reaſons and Authorities againſt that Suppoſition are not of weight enough to evince the contrary.

Before I come to my Reaſons for this Aſſertion, ſomething I ſhall premiſe touching the *Aſſyrian* Empire, and how it ſtood in relation to that of the *Babylonian*.

It ſeems that *Babylon* was at firſt the Seat of the *Aſſyrian* Empire, the building whereof ſome attribute to *Belus*, ſome to *Ninus* his Son, ſome to *Semiramis* his Wife, and ſome to others: but afterwards the *Caput Imperii* of the *Aſſyrians* was *Ninive*, built upon the River *Tigris*.

It alſo ſeems, that in proceſs of time the *Aſſyrians* either new built or repaired *Babylon* that had lain long neglected, and the ſame was peopled with thoſe People on the South of *Aſſyria* called *Caldeans*: That which gives me light of it, and indeed of the whole Hiſtory of the *Babylonian* Monarchy is *Iſaiah* 23. 13. *Behold the land of the Caldeans, this people was not till the Aſſyrian founded it for them that dwell in the wilderneſs: They ſet up the towers thereof, they raiſed up the palaces thereof.* It ſeems therefore that *Babylon* formerly neglected, by this favour of the King of *Aſſyria* proſpered into a petty Kingdom, and growing powerful did ſet up for themſelves in the time of *Ahaz* the King of *Judah* who was contemporary with *Tiglah Pileſer*, 2 *Kings* 16. 10. And poſſibly the firſt divided King of *Babylon* was that *Nabonaſſar* that gave the original of the *Æra Nabonaſſaris* that began about the beginning of King *Ahaz*, in the beginning of the 8th *Olympiad*, about four years after the Building of *Rome*.

It ſeems that either the ſame *Tiglah Pileſer*, or his next Succeſſor *Salmanaſſar* King of *Aſſyria* that carried away the People of *Iſrael* in the ninth year of *Hoſeah*, about four years after the death of *Ahaz*, 2 *Kings* 17. 6. did afterwards re-take *Babylon*; for certainly he was poſſeſſed of it at or ſhortly after the deportation of *Iſrael*; for he brought Men from *Babylon*, from *Cutha*, from *Ava*, *Hamath* and *Sepharvaim*, to put into *Samaria*. 2 *Kings* 17. 24.

It ſeems that moſt of theſe places from whence People were tranſplanted to *Samaria*, were places conquered by the *Aſſyrian* Monarch, who did as Victors uſe prudently to do, tranſplant the conquered into other places; and the ſame ſeems evident for ſome of theſe places at leaſt, and as probably for *Babylon* alſo, 2 *Kings* 18. 24. *Iſaiah* 10, 10. particularly for *Hamath*, *Sepharvaim* and *Avah*: And accordingly he tranſplanted the conquered People into *Gozan* and other places, 2 *Kings* 18. 11. which were won by *Salmanaſſar* from the *Medes* by Conqueſt. 2 *Kings* 19. 12.

Senacherib ſucceeded *Salmanaſſar*, and came up againſt *Hezekiah* in the fourteenth year of his Reign, where he received that great blow of 185000 Men,

Men, which sent him back to *Nineveh* where he was slain; and *Ezarhaddon* his Son reigned in his stead. 2 *Kings* 20. 35, 36, 37.

This gave opportunity to the new usurped Kingdom of *Babylon* again to break the Yoak of *Assyrian* Monarchy; for it evidently appears that *Berodach-Baladan* the Son of *Baladan* was King of *Babylon*, and sent to complement *Hezekiah* when there was another King of *Assyria*, 2 *Kings* 20. 12. *Hezekiah* having reigned 29 years dyed, and *Manasseh* his Son succeeded him.

Manasseh reigned 55 years, and towards the latter end of his Reign he was carried Captive to *Babylon* by the King of *Assyria*, 2 *Chron.* 33. 11. whether the King of *Assyria* had regained *Babylon*, or whether the King of *Babylon* had overcome the *Assyrian*, and so held the stile of that Monarch, appears not, though the latter seems probable by comparing the reprehension of *Isaiah*, 2 *Kings* 20. 17.

Ammon succeeded, and reigned 2 years.

Josiah succeeded, and reigned 31 years.

Jehoahaz 3 months.

Jehoiachim 11 years.

Jehoiachin 3 months.

Zedekiah 11 years; the last year of whose Reign was contemporary with the 19th year of *Nebuchadnezzar*.

Now putting all the years together from the first of *Ahaz* to the last of *Zedekiah* are about 155 years and 6 months; out of which subducting 19 years for the Reign of *Nebuchadnezzar*, there remains from the first of *Ahaz* to the first of *Nebuchadnezzar* 136 years, which comes very near to the *Æra Nabonassaris*; for according to the common Calculation the first of *Nebuchadnezzar* hapned in the 138th year of *Nabonassar*, which began about two years before the first year of *Ahaz*; or in the second year of the 8th *Olympiad*.

And that in all probability, *Baladan* who was the Father of *Merodach-Baladan* that sent to visit *Hezekiah*, might be that *Nabonassar* whose *Æra* is so much celebrated.

After the beginning of the Reign of *Nebuchadnezzar* the entire *Assyrian* Monarchy was translated to *Babylon*, and *Nebuchadnezzar* the King thereof. *Herodotus* in his First Book tells us that *Cyaxares* the Grand-child of *Dioces* first attempted the taking of *Niniveh*, but was repulsed by the aid of the *Scythians*; and that afterwards he took it, and became Master of all *Assyria*, *Excepta Babylonica quadam portione*.

But according to the Histories of *Tobit* and *Judith*, *Niniveh* was taken by *Assuerus* and *Nebuchadnezzar*, and afterwards entirely possessed by *Nebuchadnezzar*, *Tobit* 10. 17. *Judith* 11. But this is obscure, because it hath been conceived that *Nebuchadnezzar* was a common Name used amongst the *Babylonian* Kings, as *Pharaoh* among the *Egyptians*; only it may not be impossible that *Nebuchadnezzar* who was certainly contemporary with *Cyaxares* the *Mede*, might be an assistant in the Destruction of *Niniveh* with *Cyaxares*, called it may be by *Tobit*, *Assuerus*; but how he came to be sole Possessor after in the time of *Judith*, is hard to unriddle.

This *Nebuchadnezzar* made *Babylon* the Seat of his Empire, and so far enlarged it that it seemed as new built, as his own arrogant and vain-

vain-glorious expreſſion witneſſeth; *Is not this great Babel that I have built?* Dan. 4. 30.

Upon all this that hath been ſaid, it ſeems plain:

1. That *Babylon* or *Babel* was the firſt or ancient Seat of the *Aſſyrian* Empire.

2. That the ſame was firſt built by *Belus*, or *Ninus*, or *Semiramis*, as the Heathen Writers tell us; or by *Nimrod*, as the Holy Hiſtory tells us, who poſſibly might be the ſame with *Belus*.

3. That afterward the Seat of the *Aſſyrian* Empire was tranſlated to *Nineveh* the great City of that Empire.

4. That afterward *Babylon* was again either repaired or enlarged by the *Aſſyrian* Empire, and was the *Metropolis* of that part of *Aſſyria* called *Caldæa*, the Inhabitants whereof were greatly addicted to the Celeſtial Obſervation, and became ſo famous for it, that a *Caldean* and an Aſtrologer were terms equivalent in common appellation.

5. That afterward the *Babylonians* or *Caldeans* obtained or uſurped a divided Kingdom from the *Aſſyrian* Empire.

6. That the firſt King of that divided Kingdom was called *Nabonaſſar*, which give the original to the *Æra Nabonaſſaris*, beginning about the 8th *Olympiad*.

7. That about 140 years after the beginning of that Kingdom it grew ſo potent, that it acquired the whole *Aſſyrian* Monarchy, and became the Seat thereof under *Nebuchadnezzar*.

8. That *Nebuchadnezzar* again enlarged the City of *Babylon* with Buildings and Walls of incredible ſtrength and glory.

This being premiſed, I now come to thoſe Reaſons that ſatisfie me that the *Aſſyrian* or *Babylonian* Monarchy was not of that great Antiquity that the *Babylonians* and the favourers of their Tradition pretended, but had its known Original or *Epocha* from whence it began.

1. The Authority of the Heathen Authors allow not above 1400 years at moſt for the continuance of the *Aſſyrian* Monarchy, and lodge the Original of it in *Belus* the Father of *Ninus*, the beginning of whoſe Reign is by computation to be caſt in the 153d year after the Flood, according to the *Jewiſh* Account. *Vide probationes indè Petavii doctrina temp. l. 9. per totum.* The Account, according to *Diodorus Siculus*, runs thus; The *Aſſyrian* Monarchy beginning with *Ninus* laſted 1360 years unto the fall of *Sardanapalus* by *Arbaces* the *Mede*, after which that Monarchy fell in with the *Mede*: it continued there until *Pul* became the Head of the *Aſſyrian* Monarchy, and after him *Tiglah Pileſer*, and then *Salmanaſſar*, and afterwards *Senacherib*: The Proof they add to this Supputation is this; That from the Fall of *Sardanapalus* to the Taking of *Babylon* by *Alexander* are accounted 543 years, which added to the former number gives 1903 years, the *Epocha* of the *Caldean* Aſtrological Calculation brought by *Caliſthenes* to *Ariſtotle* at the Taking of *Babylon* by *Alexander*; which caſts the Beginning of the *Aſſyrian* Monarchy under *Belus*, or at leaſt under *Ninus* his Son, to be about the year of the World 1717, about 60 years after the Flood, according to the *Jewiſh* Account; though others, following alſo the *Jewiſh* Account, caſt the ſame to be about 104 years after the Flood.

But *Africanus*, and others that follow the Account of the 70 *Interpreters*, tell

tell us of seven Kings of the *Caldeans*, and six Kings of the *Arabians* that were antecedent to *Belus* in that Empire, that successively reigned in *Babylon* 440 years; that *Belus* obtained by Conquest the Kingdom, and reigned 55 years; and by this Account the Beginning of the *Assyrian* Kingdom under *Ninus* was 631 years after the Flood, and one Age after the Confusion of Languages in the time of *Phaleg*: But which way soever we take, yet we find a Beginning of the *Assyrian* Empire, though they that suppose it 440 years before *Belus*, thrust the Deluge and the Creation farther back than the *Jewish* Account.

2. The Authority of the Holy Scripture by the Pen of *Moses* gives us the Original of the *Babylonian* or *Assyrian* Monarchy in *Nimrod*, which possibly may be the Name in *Hebrew* of *Belus* the first Founder of it. And here I do not take advantage of the Divine Authority of the Sacred Scripture, but make use of it only as a History, and singly upon that account hath greater evidence of its truth than any Heathen Historian whatsoever. 1. The Writer thereof was most certainly nearer the times of the first Foundation of that Monarchy by above 800 years than any other Historian that gives us the account of the *Assyrian* and *Babylonian* Monarchy; which is a great advantage in point of evidence touching the truth of any Historical Relation. Again, 2. He was not very far distant from the Place or Seat of that Monarchy, the Wilderness and *Palestine* being not far distant from *Assyria*. 3. He was descended from him that was the native of that Country, namely *Abraham*, who was born and lived many years in the *Caldean* Country, and doubtless did bring along with him and transmit to his Posterity a fair Tradition of that Empire, being contemporary with *Peleg*, in whose time the famous dissipation of Mankind and distinction of Languages hapned. 4. He was educated in *Egypt*, the people whereof were greatly learned, especially in Chronological Computations. 5. The coherence and synchronism of all the parts of the *Mosaical* Chronology, especially after the Flood, bears a most singular testimony to the truth of his History and Computation: for although he draws not down the lineal Descendents of *Ham* and *Japhet* down to his time, but only mentions their Children and Grand-children for two or three Generations at most; yet he draws down the lineal Pedigree from *Sem* in the Sacred Line down to his very Age, together with their Births and Ages, which are a great evidence of the probability of the rest of his Account. So that if we take the History of *Moses* upon a bare Moral account, abstracted from the Authority of Divine Revelation, he hath greater evidence of the truth of what he relates than any Historian whatsoever that takes upon him the narrative of the Antiquity of Kingdoms or Empires, the ancientest of which Historians were above 1000 years later than *Moses*. But this I shall have occasion farther to improve hereafter.

The Objections against this late Original of the *Assyrian* or *Babylonian* Monarchy (for it had its successive translation into these denominations) are principally these:

1. That it appears by the Account of ancient Historians, that the *Caldeans* (in whom the *Assyrian* Monarchy began and ended) at the Taking of *Babylon* by *Alexander* had preserved Astronomical Calculations for about 400000 years; thus *Diodorus Siculus*, *lib.* 3. *cap.* 8. *Quadringenta*

tria

tria annorum millia uſque ad aſcenſum Alexandri numerant; and *Tully* in his ſecond Book *de Divinatione* mentions the number to be greater, *Quadringenta & ſeptuaginta millia annorum, in periclitandis experiendiſque Pueris quicunque eſſent nati, Babylonios poſuiſſe.*

2. That it ſeems impoſſible, that if their Monarchy began but in *Nimrod*, or ſo ſhort a time after the Univerſal Deluge, that in the time of *Ninus*, by ſome ſuppoſed the firſt, by ſome the ſecond King of the *Aſſyrians* or *Babylonians*, the Empire could have grown ſo populous as to build that vaſt City of *Babylon*, and that of *Nineveh*, whoſe ſtate and magnificence and amplitude were of incredible greatneſs; or that his Widow *Semiramis* could at once bring into the field againſt *Zoroaſtres* an Army of 1700000 Foot-men, 500000 Horſe-men, 100000 Chariots, 2000 Ships, as *Diodorus Siculus* out of *Cteſias, l. 3. cap. 5.* And therefore as well Mankind as the Empire of *Aſſyria* muſt have had a longer continuance to have ſet out ſuch an Army, than the ſucceſſion of an Empire for two or three Governours at moſt, or the ſucceſſions or propagations of Mankind within ſo ſhort a time as this is ſuppoſed to ſucceed the Univerſal Deluge, could afford. To the firſt I anſwer:

1. That ſome will have theſe Years to be but Months, which they ſuppoſe to be accounted Years by the ancient *Babylonians* and *Egyptians*: But as we have no certain evidence that they uſed to account a Month a Year, but if we had, yet that reduction will not ſerve; for that number of Lunar Months reduced to Solar Years will ariſe to above 40000 Years, which will over-reach the Creation of Mankind.

2. Therefore we may with the ſame *Tully* and *Diodorus Siculus* pronounce it to be an incredible and fabulous Account warranted by no credible evidence, but meerly their own fancy or impoſture; that becauſe they held the World eternal, would gratifie their people with a ſucceſſion of an incredible Antiquity. And it appears to be fabulous, 1. For that in all this time they would probably have gotten the perfect Theory of the Planetary Motions and Poſitions, which it is plain they did not, if we believe the ſame Author; for they were at a loſs touching the true diſcoveries and periods of the Eclipſes, eſpecially of the *Sun*. 2. For that *Caliſthenes*, who was very curious in ſearching the famous Periods of the *Babylonian* or *Caldean* Celeſtial Obſervations, at the very time when they pretended ſo great an Antiquity, namely, at the Taking of *Babylon* by *Alexander*, upon a ſtrict enquiry found their Aſtronomical Obſervations not to be above 1903 years old, which he accordingly reported to *Ariſtotle*, that employed him ſpecially in that Enquiry, as *Simplicius* reports in his Commentaries upon the Book of *Ariſtotle de Cælo*. The prodigious Accounts therefore of the *Caldeans* of the Times paſt deſerve as little credit as their Predictions of things to come, who, as the ſame *Tully* there obſerves, flattered both *Cæſar* and *Pompey* with long Lives and happy and peaceable Death; both which fell out in the ſucceſs, to both extremely contrary.

2. I come to the ſecond Objection, namely, That it ſeems altogether impoſſible that the General Flood ſhould put a period to all former Governments, and indeed to the whole Race of Mankind except eight perſons, and yet that from theſe in ſo ſhort a time ſuch vaſt and powerful Monarchies, eſpecially as that of the *Babylonian* or *Syrian* ſhould ariſe. To which I anſwer:

1. That

1. That if we ſhould admit the Computation of the *Seventy*, now much magnified by *Voſſius* and others, it would eaſily deliver us from that difficulty; for whereas the *Hebrew* Computation gives the Univerſal Flood to be but 1656 years after the Creation of Mankind, the *Septuagint* gives it to be 2262 years: and whereas the *Hebrew* Account gives us about 300 years from the Flood to the Birth of *Abraham*, and conſequently about 104; and according to ſome only 58 years from the Flood to the beginning of *Ninus* the Son of *Belus*, the *Septuagint* gives us from the Flood to the Birth of *Abraham* 1132 years; and conſequently the beginning of *Ninus* though admitted to have been about 250 years before the Birth of *Abraham*, would yet have hapned near 800 years after the Flood, which would not only give a competent time for Mankind to grow to that great multitude that is ſuppoſed, but would ſatisfie thoſe preceding thirteen Kings in *Babylon* that are ſuppoſed to have worn out 440 years before the the beginning of *Belus* the Father of *Ninus*.

2. But the Objection needs not that help, neither doth enforce us to deſert the *Hebrew* Account to ſatisfie that or the like Objections. For conſidering the long Life of the Ancients that lived within 300 years after the Flood, and conſequently their coexiſtence with thoſe that deſcended from them; we may without the help of a miraculous fertility find that in 104 years Mankind deſcended from *Noah* and his three Sons and their Wives, might ariſe to a ſtupendious multitude by that Arithmetical Progreſſion that would be found in their Generations. I ſhall not need to ſet down the proceſs of the Computation or the product, it is excellently done to my hand by *Temporarius* in his ſecond Book *Chronologicarum demonſtrationum*, and out of him by *Petavius* his *Doctrina temporum*, *lib.* 10. and out of both by *Kircherus* in the firſt Book of his firſt Tome of his *Oedipus Ægyptiacus*, where he undertakes, that in the progreſs of 200 years after the Flood the multitude of the coexiſting People might be ſo great, that if they were caſt into a ſquare *Battalia*, allowing to every perſon but one ſquare foot of ground, the ſide of that Square would be 372 Aſtronomical miles, or 25 Heavenly degrees. And thus far touching the Original of the *Aſſyrian*, *Caldean*, or *Babylonian* Monarchy.

2. Touching the *Egyptians*, they maintained the Origination of Mankind, and that the ſame was not Eternal, as it ſeems by *Diodorus Siculus* in his ſecond Book; for they ſuppoſed, in reſpect of the fruitfulneſs of their ſoil and the convenience of their ſituation, that the firſt Original of Mankind was among them, and that the *Egyptians* were the ancienteſt People in the World.

But though they admitted the Origination of Man, yet they pretended to a very great antiquity of their Nation and Government; and becauſe they would exceed all others, they ſuppoſe their firſt Governours were Gods: *Diodorus* tells us, that in the 180th *Olympiad* they pretended a ſucceſſion of Government of 33000 years, whereof the firſt 18000 years they were governed by Gods and Heroes, and the laſt 15000 years by Men.

Manetho, that wrote the Hiſtory of the *Egyptians* about the beginning of the *Grecian* Monarchy under *Alexander*, with very great pretence hath carried up their Government to an incredible diſtance before the Creation

of Mankind; for he digeſted the ſucceſſive Governments of the *Egyptians* into 32 Dynaſties, and to each Dynaſty a great number of Governours and Years, whereof 15 exceeded the time of the Flood, and therefore are omitted by *Africanus* and others that yet are fond of the credit of *Manetho:* the other 17 Dynaſties are ſuppoſed to be extended unto the beginning of the *Grecian* Empire for about 1694 years after the Flood.

But 1. This Account, even of *Diodorus Siculus*, is very uncertain; for it appears by *Cenſorinus*, *de die Natali*, *cap.* 19. that the ancient *Egyptian* year was *bimeſtris*, and after that *trimeſtris*, and after that, in latter time, of 13 months and 5 days: And ſome tell us, that yet their moſt ancient year was but one month, namely, one revolution of the *Moon* through the *Zodiack*; which if it ſhould be admitted, may ſhorten their Account of 33000 years to 3600 years or thereabout. But yet this Anſwer ſerves not, for in all probability their years continued to be 365 days ever ſince the time of the *Jewiſh Exody* at leaſt, which will carry up the Account far beyond the Creation of Man, though their former years ſhould be ſuppoſed *menſtrui* or *bimeſtres*.

Therefore it ſeems either a plain Impoſture of *Manetho*, out of an emulation of the pretended Antiquity of the *Babylonian* Monarchy, or at leaſt a very plain miſtake, by reckoning all theſe 32 Dynaſties or *Principatus ſucceſſivè*, when it ſeems they were all contemporary, and that after *Mene*, which is ſuppoſed the firſt Head of theſe Dynaſties, the Regiment of *Egypt* was divided into ſeveral Principalities, and each had his Dynaſty, but the particular Regiment of each ſeveral Principality, *Mene* being the Head to them all; which is ſo well evinced by *Voſſius* in his little Tract *de Ætate Mundi*, out of *Eratoſthenes* contemporary with *Manetho*, *Herodotus* and others, that nothing can be added to it, or reaſonably objected againſt it; though *Kircherus* in the firſt Book of his *Egyptian* Antiquities endeavours to carry on the 17 laſt Dynaſties in continued ſucceſſion from *Cham* to the diſſolution of the *Egyptian* Monarchy by *Alexander*; and ſuppoſeth the firſt 15 Dynaſties to have incurred before the Flood, and the traditional memory thereof derived down by *Cham* to his Poſterity. But of this alſo more hereafter.

Touching the *Grecians*, it is true, the *Grecian* Monarchy had its known *Epocha* in *Alexander* about the 114th *Olympiad:* but they were a People long before, though divided into ſmaller Kingdoms or States; but the Memorials of the *Babylonians* and *Egyptians* were far more ancient than thoſe of *Greece*, which derived much of its Learning from the *Egyptians*. *Cenſorinus* in his golden Book *de die Natali* gives us out of *Varro* a threefold Period of the *Grecian* Hiſtories or Monuments or Times, *Cap.* 21. namely, 1. Ἄδηλον or *incognitum*, from the firſt Origination of Mankind (if it had an Original) *ad cataclyſmum priorem*, or the *Ogygian* Flood: 2. Μυθικὸν or *fabuloſum*, from the *Ogygian* Flood to the firſt *Olympiad:* 3. *Hiſtoricum*, from the firſt *Olympiad* until his time. For the firſt of theſe times, *Sive ſemper fuit, ſive habuit initium, certè quot annorum ſit non poteſt comprehendi:* for the ſecond; *Non planè quidem ſcitur, ſed creditur eſſe annos circiter mille & ſexcentos*, though he reduceth it by his account to a ſhorter time; namely, 400 years from the *Ogygian* Flood to *Inachus*, and from him to the firſt *Olympiad* according to ſome 400, according to others 395, 407, or 417: I ſhall not trouble my ſelf with the curious enquiry

enquiry into the number, or the different Account of Chronologers touching it: But within the compaſs of this *tempus μυθικὸν*, or *Periodus fabuloſa*, hapned many of thoſe Relations of the *Greeks*; namely, the Age of *Prometheus*, the Flood of *Deucalion*, ſhortly after the beginning of the Dynaſty of the *Athenians*, in the time of *Cretopus* King of the *Argives*; *Incendium Idæ*, *Cadmus* and *Europa*, *Ganymedis raptus*, *Phaetontis incendium*, *Hercules Amphitryonis filius*, *Expeditio Argonautarum*, *Bellum Trojanum & Reditus Heraclidarum*, *Ionica migratio*, and many other fine Stories that have furniſhed ſome of the Poetical Hiſtorians of after Ages.

But however *Cenſorinus* makes his Computation, *Inachus*, who was the firſt King of the *Argives*, though he were about 375 years after the beginning of the *Aſſyrian* Monarchy, and contemporary with *Iſaac*, yet he began his Reign about 100 years before the *Ogygian* Flood, which hapned in the latter end of *Phoroneus* the Son of *Inachus* and ſecond King of the *Argives*. So that *Inachus* was about 100 years before the *Ogygian* Flood, and about 1070 or 1080 years before the firſt *Olympiad* upon this account.

This then being, as it ſeems, the ſtate of theſe Periods, there ſeem two Nations of the *Grecians* that pretend to greateſt Antiquity, namely, the *Argivi* and the *Attici*.

The former had their beginning with *Inachus*, whether before or after the *Ogygian* Flood it will not be much of moment, but at leaſt within 1070 years before the firſt *Olympiad*, which is the higheſt time that the *Grecians* pretend unto.

Touching the *Attici*, the *Grecian* Memorials give us no higher Account than of *Ogyges*, in whoſe time it is ſuppoſed the *Ogygian* Flood hapned in that part of *Greece* called *Attica*, and takes its name from him, namely, *Diluvium Ogygium*.

Out of this Kingdom aroſe the Dynaſty of the *Athenians*, about 200 years after the *Ogygian* Flood, wherein *Cecrops* was the firſt Governour contemporary with *Moſes*; he firſt ſet up the Worſhip of *Jupiter*, as ſome report. And ſo we have the Original of the Government of the *Argives* in *Inachus*, of the *Athenians* in *Cecrops*.

It is true, the *Egyptian* Prieſt under the name of *Timæus* in *Plato* tells us a large Story of the Iſland of *Atlantis* far bigger than *Aſia*, and that although now that goodly Iſland be loſt and ſwallowed up in the Sea, yet the *Athenians* were a kind of Colony tranſplanted from that Iſland into *Greece* about 7000 years before *Solon*'s time. But this is one of thoſe Poetical Fictions wherewith *Plato* plays, mingling more ſerious things with it in the following part of his Diſcourſe; and the Story hath no footſteps of any evidence for it, unleſs we ſhall ſuppoſe that *Atlantis* to be an Iſland that was before the Univerſal Deluge, and deſtroyed by it.

4. Concerning the *Seres* or *Chineſes*, a People whoſe Cuſtoms and Hiſtories were ſtrangers to *Europe* till of late times, wherein ſome Travellers have lately given us ſome account of thoſe great Periods both of their Hiſtories and Government. *Voſſius* in that little Book *de Ætate Mundi*, tells us by relation from others, That by their Hiſtories and Monuments their Empire hath laſted 4505 years in the year of Chriſt 1658, which reacheth ſome Ages beyond the Flood according to the *Hebrew* Account, but according to the *Septuagint* the beginning thereof falls in the time of *Phaleg*, 531 years after the Flood; which he brings as an

Argument for the Authority of the *Septuagint*: But the truth is, we are ſtill ſtrangers to the true ſtate of Chronology of the *Seres* or *Chineſes*, what we have touching it, is by broken relation of ſome few Travellers, and what they had, poſſibly may be gathered up from the vulgar Traditions of that People, upon which little of ſound concluſion can be made touching their Antiquity. But be it true or not, which we have from theſe Relations, yet their longeſt Period gives them a Beginning, and reacheth not ſo high as the pretended *Epoch* of the *Babylonians* or *Egyptians*, much leſs is there any thing in them that gives any colour of Evidence of an Eternal Duration.

And thus I have gone through the Examination of thoſe Kingdoms and Monarchies which pretend to greateſt Antiquity, the *Babylonian* or *Aſſyrian*, the *Egyptian*, the *Grecian*, and the *Seres* or *Chineſes*; upon all which we may obſerve,

1. That though many of them pretend to a very great Antiquity, yet there are none that give us any ſufficient Evidence of an Eternal Duration; for what are thoſe Periods of the *Egyptians* or *Babylonians* to Eternity? Nay many of theſe Nations that pretend to the longeſt continuance, as the *Egyptians* and *Grecians*, yet diſclaim an Eternal Succeſſion; pretend themſelves to be *Aborigines*, and to be the firſt People, but yet not to be Eternal. Indeed their vaſt continuance, if admitted, would ſeem to contradict the Authenticalneſs and Authority of the *Moſaical* Hiſtory, which contains a Relation of the Beginnings of Mankind within the compaſs of about 5660 Years, according to the *Hebrew* Account, and about 7240 Years, according to the *Septuagint*; but doth not ſo much as ſuppoſe an Eternity thereof.

2. That notwithſtanding theſe great pretenſions of Antiquity, yet upon a true examination their great pretended Antiquity is fabulous; and the Origination of their Monarchies began ſome Ages after the general Deluge; and ſo the truth of the Holy Hiſtory concerning the Inception of Mankind, and the Inception of all the Monarchies in the World after the Deluge that happened under *Noah*, 1656 Years after the Creation of Mankind, is not at all weakened by thoſe Fabulous Antiquities of the *Babylonians*, *Egyptians*, or *Grecians*.

3. That this Inception of the Notable Empires and Kingdoms of the World, even of thoſe that pretend greateſt Antiquity, and the termination of the uttermoſt Extent of the Hiſtories of the *Babylonians*, *Egyptians*, and *Grecians*, within the compaſs of the Extent of their pretended Monarchies, is an Evidence againſt the Eternity of Mankind; for had Mankind been Eternal, they had infinite Ages ſince arrived to all the perfection of Political Government, and to all thoſe Means and Arts for the preſerving the Memorials of things paſt, as they have now attained unto; there would have been no *tempus* ἀδηλον, or *obſcurum*, among the *Grecians*, but there would have been as fair Monuments and Hiſtorical Narratives of things paſt, before the *Olympiads* or the *Ogygian* Flood (which was not univerſal) as after. I ſhall conclude therefore with *Lucretius*, *lib.* 5.

Preterea, ſi nulla fuit genitalis origo
Terrai & Cæli, ſemperque æterna fuerunt;

Cur

Cur ſupra bellum Thebanum & funera Trojæ
Non aliàs alii quoque res cecinere Poetæ,
Qui tot facta virum toties cecidere, neque uſquam
Æternis famæ monumentis inſita florent?
Verùm ut opinor habet novitatem ſumma, recenſque
Natura eſt mundi, neque pridem exordia cepit:
Quare etiam quædam nunc artes expoliuntur,
Nunc etiam augeſcunt, &c. ——

But yet this Conſideration touching the Antiquity of Monarchies, their Inception, and the Narratives and Hiſtorical Monuments of things, happening within the Periods of their Commencement and Continuances, are not of that weight that we can lay the ſtreſs of this *Hypotheſis* of the Inception of Mankind upon: And therefore this Conſideration muſt be taken with its allay, I ſhall therefore fully ſet down thoſe Inſtances that do give this Conſideration its due abatement.

1. It is no Conſequence, That becauſe a Monarchy or Kingdom had its Beginning, that therefore the People that conſtituted the *Moles* of that Kingdom had its Beginning: Kingdoms, Monarchies, and States, often change their Governours, and the Forms of Government, and their Stiles and Denominations, as the Silk-worm doth his ſhape, and yet the People in a continued ſucceſſion the ſame. *Rome* took its Name from *Romulus*, but the People were a *Farrago*, collected and gathered out of the neighbouring Nations. *Greece* fell into one Monarchy under *Alexander*, yet the People (that were the Stuffing, as it were, and Materials of that Monarchy) were exiſting before in other Forms of Government, and under other Governours. And though it is by ſome ſuppoſed, That the *Aſſyrian* Monarchy began in *Ninus*, yet *Diodorus* out of *Cteſias* tells us, That he made up that great Structure of the *Aſſyrian* Monarchy by the Conqueſt of divers People, who thereby were added to it, as the *Egyptians, Phenicians, Syria, Cœlicia, Pamphilia, Lydia, Caria, Phrygia, Myſia,* and many more, mentioned by him, *l.* 3. *cap.* 1.

England began not to be a People, when *Alfred* reduced it into a Monarchy, for the Materials thereof were extant before, namely, under the Heptarchy. So that the finding out of the Head of a Monarchy is not like the finding out the Head of a River in the Fountain, or the Head of a Family in one common Parent: The ancienteſt Monarchy might have a Beginning, and yet the People, that are the material conſtituent of it, might exiſt long before, under other Forms or Viciſſitudes of Governments.

2. All Nations do not always begin their Hiſtories, or the Matter, of the ſame Antiquity with the People touching which they write; but ſome earlier, ſome later, according to the variety of their Opportunities, Educations, and Diſciplines.

The *Iſraelites* were certainly the moſt knowing People of the World, began early to record the Memorials of their own Times, and of thoſe that anteceded them, delivered down by Tradition from the Patriarchs: Thus did *Moſes*; and the Annals of that People are carried down to the very diſſolution of their Government. The *Phenicians* began their Hiſtorical Monuments after them, the *Grecians* after them. The *Pelaſgi* and *Attici* were a Peo-

a People long before *Homer* wrote. *England* was doubtleſs Inhabited before *Cæſar* came over, yet we have few Monuments of *Britain* more ancient than *Cæſar* gives us; and from him, except *Beda*, we have few Authentical Hiſtories by any known Hiſtorian before the Conqueſt by King *William*; but they have been all written ſince, or very near his time; and many of the things which they have put together touching the *Britains*, *Picts*, *Danes*, yea and the beginning of the *Saxons*, have been collected out of broken Monuments in Monaſteries, and Tradition, and digeſted into *ſeries* and order of times by thoſe that have written long ſince the things done; by men that lived ſince the *Normans* came in, as *Henry* of *Huntington*, *William* of *Malmsbury*, *Roger Hoveden*, *Matthew Paris*, and others.

3. A third difficulty is this: That in thoſe elder times there were not thoſe means of preſerving the Monuments of things paſt, as after times afforded; for whatever antiquity the World may be ſuppoſed to be, it is plain that Arts have increaſed and grown: Printing is a new Invention, and although Letters and Writing were ancient among the *Phenicians*, and from them derived to the *Greeks*, yet we muſt ſuppoſe they were not ſo perfect or ſo common in the elder Ages as in thoſe that ſucceed them. And therefore thoſe that contend for an Eternal ſucceſſion of Men in the World, do ſuppoſe that by a kind of circulation or rotation Arts have their ſucceſſive invention and perfection and traduction from one People to another; and conſequently though ſome might be early able to deliver over Hiſtorical paſſages, as being better inſtructed in Letters and Writing, and more civilized than others, yet others attained it later: As the *Europeans* had their Learning from the *Aſiaticks*, ſo the *Americans* have it from the *Europeans*, and yet the People of *Europe*, *Aſia*, and *America* may be of equal Antiquity.

Beſides all this, there have been many viciſſitudes and changes whereby ancient Monuments and Hiſtories have been loſt: As 1. The Variation of Languages, or at leaſt of the Characters wherein they were written, many things written in former Ages being ſcarce legible in after Ages, and ſo neglected. 2. Wars and Deſolations hapning thereby, which obliterate many ancient Monuments. If by a kind of common ſtipulation or pact as it were, Monaſteries had not had a kind of common Protection in the viciſſitudes of the Conqueſts of *England* by the *Picts*, *Danes*, *Saxons* and *Normans*, we had had very little extant of ancient things. 3. Tranſmigrations of People from one Country to another, whereby they left their ancient Monuments behind them, which were neglected by them that ſucceeded them. 4. Floods and Inundations, eſpecially in the parts of *Aſia*, which ſwept away many ancient Monuments.

Theſe are the Allays that are to be given to this particular touching the *Epochæ* and Original of Monarchies, Kingdoms, and States, and the Monuments and Hiſtorical Relations of them or hapning in them, and to the weight of thoſe conſequences deduced or deducible from them, in order to the Argument in queſtion touching the Origination of Mankind.

CAP.

CAP. IV.

The Third Instance of Fact proving the Origination of Mankind, namely, the Invention of Arts.

I Come to the Third Instance of Fact, namely, the Discovery and Perfecting of Arts, and the new Discoveries that later Ages have made of things that were not formerly known.

And this Topick consists principally of these parts; 1. That there have been such Discoveries of Things and Arts not formerly known: 2. That consequently the World, especially of Mankind, is of a far later Edition than Eternity.

Touching the former of these, it is very evident both by the Tradition of the Ancients, and also by our own unquestionable Experience, that very great Discoveries have been in several Ages made of Things and Arts that were hidden and unknown unto precedent Ages. I shall not trouble my self with those large Catalogues of profitable Inventions which have been successively discovered, when before they were not known, at least for ought appears to us; as the use of Husbandry, the making of Wine and Oyl, the discovery of the Letters of the Alphabet in successive Ages, Musick, Military and Civil Discipline, Engins of War, and Navigation: These and infinite more have been by the Industry of former Writers reduced to their several *Epochæ* and Authors of their Discoveries, and some of the Authors have had therefore divine Honour given to them by the admiring Heathen. These several Inventors and Inventions are registred by *Diodorus Siculus* in his first six Books, by *Clemens Alexandrinus* in the first Book of his *Stromata*, by *Pliny l. 7. cap. 56.* and *ex professo* by *Polydore Virgil* in his eight Books *de Rerum Inventoribus:* In which and other Collections of that kind, although possibly there be many things that are fabulous, or grounded upon a very light and uncertain tradition; yet there are many things that are true or very credible, especially since the Monuments of ancient times give us an account of the most remote Ages of Men; *Rudes primùm & incuria silvestri non multùm à ferarum asperitate dissimiles*, *Macrob. in somnio Scipionis*, *l. 2. cap. 10.* see the elegant description of the elder Inhabitants of the World, *Lucret. l. 5.*

Nec commune bonum peterant spectare, neque ullis
Moribus inter se scibant neque legibus uti.

With which description of the elder World agrees *Plato* in his *Politicks*, *Nudi enim & sine stragulis magnam partem foris & sub dio vitam colebant*; and the same *Plato* in his third Book *de Legibus* supposeth, that those relicks of Men that escaped the ancient Deluges by flight into the Mountains became perfectly ignorant in process of time of those Arts and conveniences of humane Life, which possibly their Progenitors might have been better acquainted with.

But we need not go so far for a full conviction of that admirable Discovery and Improvement of Arts and other things, especially such as are necessary for humane Life.

In

In matters Aſtronomical we have a far greater light than what was two thouſand years ſince; for we find the old *Hypotheſis* of the Heavenly Syſtem called ſince in queſtion by *Copernicus*, *Galilæus*, and *Kepler*; the ſolidity of the Orbs detected to be untrue, by the plain diſcovery of *Tycho Brahe* and others; the new diſcoveries of Stars and Aſteriſms, and their figures, by the help of the Teleſcope, demonſtratively and to the ſenſe.

In matters Philoſophical many new Diſcoveries have been made by Experiences, whereunto the Ancients never attained: And although the Bodies of Men, Animals and Inſects have been theſe many thouſands of years expoſed to the view and ſearch of diligent Phyſicians and Anatomiſts, yet it is a wonder to ſee what new Diſcoveries have been made in Anatomical Diſſections and Obſervations, which ſeem wholly hidden to the Ancients; as thoſe of the Circulation of the Blood by Doctor *Harvey*; the *Venæ lacteæ* by *Aſellius*; the *Repoſitorium Chyli* of *Pecquet*, with the method of its deduction into the *Vena cava*; the proceſs of Generation and of the Formative actions; the curious Diſcoveries of the Parts and Faculties of ſmall Inſects, by the help of the Microſcope, rendred by *Malpighius* and others.

Again, the great Diſcoveries that have been made by the means of Pyrotechny and Chymiſtry, which in late Ages have attained to a greater height than formerly.

Again, in matters Mechanical, although it be true that this latter Age hath not arrived to that incredible skill of *Archimedes*, yet Mechanical powers have been ſtrangely improved, as we ſee in the late improvement of the late diſcovery of the Motion of the *Pendulum*, whereby the portions of Time are not only meaſured with an incredible exactneſs, but the uſe thereof tranſlated unto Watches, Clocks, and other Engins; ſo we have high advancement of Dialling, Clocks, Pumps, Fountains and other Motions beyond the acqueſts of former Ages.

And although the Art of Navigation hath been very ancient, and the uſe of the Mariner's Needle, which ſome carry up to *Amalpes* an *Arabian* in the year of Chriſt 1360; others to the *Chineſes*, and by them diſcovered to *Paulus Venetus*; others carry it up to King *David*: yet the Art of Navigation hath been ſince greatly improved, and many excellent Diſcoveries in relation to the Inclination and Variation of the Magnetick Needle. To theſe we may add the uſe of Guns, Gunpowder, and Printing, which though by ſome aſſerted to be of long uſe in *China*, yet in this Weſtern part of the World the original of the Invention hath its known *Epocha*.

By theſe and many more Inſtances of the like kind it may appear, That many Inventions and Diſcoveries of things not only of curioſity but of uſe and convenience to Mankind have had their known and certain *Epochæ*, or a ſufficient evidence of times when they were not uſed or known in the World.

2. The conſequence of this Suppoſition ſeems to be this; That in as much as theſe had their diſcoveries within known Periods, it is not ſuppoſable that the ſucceſſions of Mankind could have been without a Beginning, but rather that they had a Beginning within a reaſonable time: for it is not conceptible that in an infinite, or indeed in a very long period of Revolutions of Mankind, thoſe or any things of this kind diſcoverable would have been of ſo late and puiſne a diſcovery: This is

the

the Argument of *Lucretius*, who though an Asserter of the Eternity of Matter and Motion, yet together with his Master *Epicurus* asserts a Beginning of this World which we now behold, *Lib.* 5.

Quare etiam quædam nunc artes expoliuntur,
Nunc etiam augescunt; nunc addita navigiis sunt
Multa, modo organici melicos peperere sonores;
Denique natura hæc rerum ratióque reperta
Nuper ----------

And upon the same account *Macrobius l.* 2. *cap.* 10. in *Somnium Scipionis*; *Si enim ab initio, imò ante initium fuit mundus, ut Philosophi volunt, Cur per innumerabilem seriem seculorum non fuerat Cultus quo nunc utimur inventus? Non Literarum usus quo solo memoriæ fulcitur Eternitas? Cur denique multarum rerum experientia ad aliquas gentes recenti ætate pervenit? ut ecce Galli vitem vel cultum oleæ, Roma jam adolescente, didicerunt; aliæ verò gentes adhuc multa nesciunt quæ nobis inventa placuerunt. Hæc omnia videntur æternitati rerum repugnare, dum opinari nos faciunt certo mundi principio paulatim singula quæque cœpisse.*

But although this Argument at the first view may seem to have much of evidence in it of the Origination of Mankind, yet it seems too weak to lay any great weight, at least singly, upon it, as will appear by what follows; though in consort with other Instances it hath its use and weight.

The Discovery or Invention of things may seem to be upon these, or some of these Methods.

2. It seems to me that some things have been discovered unto Mankind by a more immediate interposition of the Divine Providence, or the ministration of Angels; as for instance, the Medicinal Virtue of some Herbs, Vegetables, or Minerals, that lye not in the ordinary road of Experience, or analogical collection from Circumstances, Signatures, or Observation.

2. Some things were discovered experimentally, though perchance not intentionally, or by design in the first discovery: And thus probably the Virtues of ordinary Simples came to be discovered; for the Food of Mankind being anciently Herbs and Fruits, or at least of such of Mankind who either through choice, custom or necessity were driven to that abstemious Diet, there did doubtless occurr the experience of various temperaments and operations of those Herbs; some purgative, some emetick, some sudorifick, some astringent, which gave Men opportunity of digesting them into several ranks and uses.

3. Some things were discovered *ex prænotis, & per viam rationalis discursus:* Thus probably Men by the Signatures, Tasts and Colours of Herbs, bearing analogy to other things they knew, concluded fairly touching their Nature and Use, which by Tryal and Experience they improved into more fixed and stable Theorems and Conclusions: And upon this account also many Practical Arts, especially relating to Numbers, Weight, Measure and Mechanism had their production; for the Rudiments of Proportion being lodged in the Mind, they seem to have grown intentionally and *ex industria* into those various practices of

Arithmetick, Geometry, and Mechanicks resulting from those principles *per media processus rationalis*; and thus those practices of the Rules of Proportion, Mechanical Motions, Staticks, Architecture, Navigation, Measuring of Distances and Quantities, and infinite more did arise.

4. Some things in their first discovery seem purely accidental, and although possibly the operation of Reason and Tryal and Experiment might or may carry on the Invention into farther Improvements and Advances, yet in the very first *primo primum* of the Discovery it may be accidental: The old, whether true or fabulous Discovery of Fire may serve to explain my conception; wherein it is supposed, that one sitting upon a Hill and tumbling down Flint stones, upon the collision thereof he observed sparks of Fire, which nevertheless he after improved by adding combustible materials to it; and doubtless upon such and the like occurrences many Chymical and other accidental Discoveries have been made, besides and beyond and without the intention of the Operator: And I well knew a Person that had not capacity enough to deduce any thing of curiosity *per processum rationalem*, yet by accidental dealing with Water and some Canes did arrive to a most admirable excellence in some Mechanical Works of that nature, though he never had the Wit to give a reason of his performance of them.

5. Some things have been found out by a kind of necessity and exigence of Humane Nature; such as Clothes, Societies, Places of Defence and Habitation, and possibly much of the plainer sort of Tillage and Husbandry; *Venter magister artis, ingeniique largitor:* and commonly these were the earliest Inventions, because Nature stood early in need of them. And hence it came to pass, that they who had *Cœlum clementius*, that afforded them necessaries without the assistance of considerable Industry, continued longest rude and uncultivated. And therefore if the Husbandry of *Ceres* or *Triptolemus* came late into the World, it was because those Eastern Countries then inhabited abounded with plenty of Fruits, which supplied the defect of Husbandry till the World grew more dispersed and fuller of Inhabitants, and transmigrated into parts of less natural fertility.

6. Some things have been discovered not only by the Ingeny and Industry of Mankind, but even the inferior Animals have subministred unto Man the invention or discovery of many things both Natural and Artificial and Medicinal, unto which they are guided, and in which they are directed by secret and untaught instincts, which would be infinite to prosecute. The Fable or History of *Glaucus* observing Fishes to leap into the Sea, upon tasting an Herb by the shore; the Weasel using Plantane as an Antidote; the wounded Stag using Dittany to draw out the Arrow, (if true) and divers others, give us some Analogical Instances.

And these are ordinarily the Methods of Discoveries. The Things or Objects discovered are principally of two kinds; *viz.* 1. Such things as are already lodged in Nature, as Natural Causes and Effects, and those various *Phænomena* in Nature, whereof some lye more open to our Senses and daily observation; others are more occult and hidden, and though accessible in some measure to our Senses, yet not without great search and scrutiny, or some happy accident; others again are such as we cannot

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attain to any clear ſenſible diſcovery of them, either by reaſon of their remoteneſs, diſtance, and unacceſſibleneſs, as the Heavenly Bodies and things cloſed up in the bowels of the Earth; or by reaſon of their ſubtil and curious texture, eſcaping the clear and immediate acceſs of Senſe, as Spiritual Natures, the Soul and its various Faculties and Operations, and the Reaſons or Methods of them, wherein for the moſt part our acqueſts touching them are but Opinion and Conjecture, wherein Men vary according to the variety of their Apprehenſions and Phantaſies, and wherein (becauſe they want that manuduction of Senſe which is our beſt and ſureſt Guide in the firſt Inſtance in matters Natural) Men range into incertain, inevident, and unſtable Notions.

2. Such things as are Artificial, wherein ſome Diſcoveries are ſimply new, others are but acceſſions and additaments to things that were before mentioned: Some things are of convenience, utility or neceſſity to Humane Nature or the condition of Mankind; ſome things are of curioſity: ſome things are found out caſually or accidentally; ſome things intentionally, and out of thoſe Principles or Notions that ſeem to be lodged originally in the Mind.

Now upon theſe Conſiderations premiſed, it ſeems that the late Diſcovery of many things in Nature, and many Inventions in Art are not a ſufficient Evidence of the Origination or late Origination of Mankind, at leaſt taken ſingly and apart.

1. In things Natural the variety is ſo great, and the various combinations therein ſo many, that it ſeems poſſible that there ſhould not have been a full diſcovery of the whole ſtate of things Natural unto the Minds of Men, although there were ſuppoſed an eternal duration of Mankind. We may give our ſelves a *Specimen* hereof, if we look but back upon that one Piece of Nature with which we have reaſon to be beſt acquainted, namely, our ſelves; which by reaſon of our vicinity to our ſelves, our daily converſation with our ſelves and others of the ſame *Species*, our daily neceſſities and opportunities of inquiring into our ſelves, and the narrowneſs of our own nature in compariſon of the vaſt and various bulk of other things, ſeems to render us a Subject capable of being very fully diſcovered. And beſides all this, the more inquiſitive and judicious part of Mankind have induſtriouſly ſet themſelves for many Ages to make the beſt diſcovery they could of the nature of Man. *Hippocrates* the Father of Phyſicians, who lived in the 82d *Olympiad*, and above 2000 years ſince buſied himſelf much and profoundly in this Enquiry; and a ſucceſſion of induſtrious, obſerving and learned Phyſicians and Naturaliſts have purſued the Chaſe with all care and vigilancy, and by the help of Anatomical Diſſections have ſearched into thoſe various *Meanders* of the Veins, Arteries, Nerves and Integrals of the Humane Body: Yet for all this, in this ſenſible and narrow part of Humane Nature, the huſk and ſhell thereof, how much remains after all this whereof we are utterly ignorant? So that notwithſtanding all the Diſcoveries that have been made by the Ancients, and thoſe more curious and plentiful Diſcoveries by the latter Ages, there ſtill remains ſo much undiſcovered that leaves ſtill room for Admiration and Induſtry, and gives us a powerful conviction of our Ignorance, that the things we know in this little narrow obvious part of Nature the

Body of Man is the leaſt part of that we know not touching the ſame.

But when we yet conſider how ſmall a part of the Humane Nature is that which is the Corporeal part; and how little we know with any tolerable certainty touching the more noble Parts, Acts and Operations of the Humane Nature, the Principle of Life, Senſe, and Intellection, we have ſtill reaſon to conclude that this little, narrow, near Subject of our Knowledge is yet very difficult for us actually and fully to comprehend, and furniſheth our ſearch with more Materials than we are poſſibly able to exhauſt with all our Induſtry, Care, Study, and Obſervation. When I conſider thoſe difficulties that occurr touching the Production of that we call the Soul, whence it is, what it is, what power it is that performs the *proceſſus formativus* that digeſts, diſpoſes, models the *prima ſtamina naturæ humanæ* that acts with moſt admirable skill, dexterity, infallible order, and in the moſt incomparable way of Intelligence, and yet wholly deſtitute of thoſe Organs whereby we exerciſe the operations of Life, Senſe, and Intellection. That incomparable accommodation of all parts and things fitteſt for uſe, for time, for convenience: Again, when I conſider thoſe various powers of the Senſible Nature, that Regiment that it performs and exerciſeth by the Spirits, Nerves, and Muſcles; the admirable powers of Senſation, of Phantaſie, of Memory, in what Salvatories or Repoſitories the *Species* of things paſt are conſerved: Again, when I conſider the ſtrange powers of Intellection, Ratiocination, Reminiſcence, and what that Thing or Nature is that performs all thoſe various operations: And when I conſider how little, how incertain, how contradictory thoſe Sentiments of Mankind have been touching theſe things, wherein nevertheleſs they have ſearched and toyled Age after Age; I muſt needs conclude, That if we had no other ſubject of our ſearch and enquiry beſides our ſelves, we ſhould have for ought I know for infinite Ages a continued ſtock for our diſcovery; and when we had learned much, yet ſtill even in this narrow Subject there would be ſtill ſomewhat to be learned; and we ſhould never be able actually to overtake the plenary diſcovery of what would remain;

Sic rota poſterior currit, ſed in axe ſecundo.

And if this one ſmall near piece of Nature ſtill affords new matter for our diſcovery, where or when ſhould we be ever able to ſearch out all the vaſt Treaſuries of Objective Knowledge that lyes within the compaſs of the Univerſe? So that the new Diſcoveries that have been made in Natural things is not a ſufficient evidence of the newneſs of the exiſtence of Mankind, becauſe of that inexhauſtible Magazin of Natural Cauſes and Effects which poſſibly will ſtore Mankind with new Diſcoveries unto an everlaſting continuance.

2. And the ſame that is ſaid for the redundance of matters intelligible and cognoſcible in things Natural, may be alſo applied to things Artificial. There are theſe things that render Artificial Inventions prodigiouſly fertil and various: 1. The variety of the materials of things that may be applied to Artificial ends and uſes; as we have Iron, Braſs, Wood, Stones, Sounds, Light, Figuration, Tactile qualities; ſome things of a more

more active, ſome things of a more paſſive nature; ſome things diverſified in degrees of heat, cold, dryneſs, moiſture; various Elements, Meteors: and infinite variety of theſe Materials we have, which may be the material conſtituents or ingredients into Artificial Structures, Engins, Motions, or Effects. 2. The variety of the Apprehenſions and Fancies of ſeveral Men in the deſtination and application of things to ſeveral ends and uſes; and this ariſing in them partly by the various texture and frame of their very temper of their Brains, Blood, and Spirits; partly by variety of Education, partly by Neceſſity, partly by Accidental Emergency: by this means poſſibly the ſame Material is variouſly managed into various Artifices, according to this variety of Phantaſy or Imagination. As take the ſame Wool, for inſtance, one Men felts it into a Hat, another weaves it into Cloth, another weaves it into Kerſey or Serge, another weaves it into Arras; and poſſibly theſe variouſly ſubdiverſified according to the phantaſy of the Artificer: For it is moſt certain that there is not greater variety in the figures and complexions of Mens Faces and Features, and in the contemperations of their natural Humours, than there is in their Phantaſies, Apprehenſions and Inclinations. And hence it is that, for inſtance, the texture of *Zeuxes* or *Apelles* inclines him to the invention or improving of Painting, *Archimedes* to Mechanical Motions, *Euclid* to Geometrical Concluſions: and hence it muſt neceſſarily come to paſs, that according to the variety of Men that either caſually or induſtriouſly apply themſelves to Artificial Diſcoveries or Inventions, there will enſue variety of Inventions. That Invention that did ariſe from the *Genius* or temperament of the Phantaſie or Imagination of *Apelles*, would probably never in the ſame individual Invention have been found out before him, though the World of Men had laſted millions of Years before him; becauſe perchance in that long Period no Man had ever the ſame Syntax of Phantaſie or Imagination that he had, and conſequently though ſome Artificial Inventions are as it were of that common congruity to the general Phantaſies of Men; or ſeem to ariſe upon a common ſutableneſs to the uſe or exigence of Mankind, as digging, planting, ploughing, ſowing, making of Apparel and Houſes; yet ſome have that particular reſpect or cognation to the Phantaſie of this or that particular Man, that they would never have been found out till ſuch a Man had had his being in the World; and conſequently the Invention was not found ſooner, becauſe the Man to whoſe Phantaſie this Invention was accommodate was not born nor lived ſooner.

3. The variety of Application and Combination of ſeveral Materials of Artificial things in their ſeveral Artificial Complements: For it is very plain, that even where things are finite and determinate in their number, yet they ariſe to a ſtrange and prodigious multitude, if not indefinitude, by their various Poſitions, Combinations, and Conjunctions: The Letters of the Alphabet, which ariſe from the ſeveral apertures and conjunctions of the Tongue, the Teeth, the Palate, the Lips, the Throat, are but 24 in number, yet various combinations of theſe Letters are the formal conſtituents of all the Words and Languages in the World: And yet all the Words and Languages in the World do not amount to the hundredth part of thoſe other articulate Languages that might be made out of the remaining combinations of the Letters of the Alphabet, which are not

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in uſe in any or all the Languages of the World. The general diviſion of Lines in Geometry is into ſtreight and crooked, but the various combinations and poſitions of theſe two ſorts of Lines would make more Figures of Superficies than all the Ages of the World could poſſibly collect or deſcribe.

And from this variety of Materials, variety of Phantaſies and Imaginations, and variety of Combinations or Junctures of things, we may reaſonably conclude that the multitude of Artificials is inexhauſtible; and that although there be many new Inventions diſcovered daily which were not diſcovered before, yet that alone is no ſufficient Argument of the Novity of Mankind; for this Magazin of Artificials is ſo fruitful, vaſt, and indeterminate, that if the World ſhould laſt millions of Ages there would be a ſtore and ſupply for immenſe Ages, *Et ſemper aliquid ultra.*

It may be poſſibly objected, That although the variety of Materials are great, and poſſibly indefinite and indeterminate, and ſo alſo of the Fancies of Men, and conſequently thoſe various combinations of things that are conſtituents of new Inventions, yet they are not Infinite: For although the combinations of the 24 Letters of the Alphabet are a prodigious number, yet if inſtead of 24 Letters there were 24 millions, as thoſe 24 millions are a finite number, ſo would all the changes and combinations thereof be finite, though perchance not eaſily computable by Arithmetick, in reſpect of the huge exceſs of the number; and conſequently, in an infinite Period of Time, though one of theſe combinations ſhould be exhibited in a million of Years, the whole number of combinations had been infinite Ages ſince exhauſted, and no combination left to make up the material or formal conſtituent of a new Invention.

I anſwer; It is true, the combinations of things finite exiſting muſt needs be finite as well as the things themſelves. But, as I have before ſuppoſed, the Invention of Arts doth not only depend upon the exiſtence of the Materials of things Artificial, no nor ſingly upon the various combinations of thoſe Materials; but upon the Phantaſie, Deſign and Deſtination of Man, which is various, according to thoſe various Temperaments that have ingredience and influence into him: yea and poſſibly alſo upon certain junctures and concourſes of things that might never before befall any other. And therefore, as if upon a ſuppoſed Eternal Succeſſion of Mankind we ſhould find but one individual *Socrates* or *Plato*, ſo it is not impoſſible to ſuppoſe that *Socrates* or *Plato* ſhould conſiſt of ſuch a Temperament and Conſtitution, ſuch a Phantaſie and Imagination as never any man before had exactly the like; and conſequently he might be the diſcoverer of ſome ſuch Invention as never before was diſcovered. Or if we ſhould be ſo hardy as to ſuppoſe a Man pre-exiſting in all things exactly like to *Socrates*, both in his Temperament, Body and Mind, yet poſſibly thoſe accidental Occurrences which excited the Imagination of *Socrates* to the diſcovery and compoſing of ſuch an Invention might not fall in with that Man that is ſuppoſed of a perfect parity with *Socrates*.

For although perchance exiſting Individuals may not be actually Infinite, yet certain it is that the potential gradation of things may be potentially Infinite, and ſo may the junctures of Occurrences be potentially Infinite; whereby it may come to paſs, that though an Eternal Succeſſion of

of Men were admitted, yet *in ista hora* a Man might be produced that had never *parem omnibus gradibus & numeris:* And such junctures of Occurrences might happen *in ista hora* that had never an exact parity of all Circumstances, and the same exact weight and number of Occurrences in any antecedent portion of Eternity.

And hence it may very easily come to pass, that as any one Invention had not its existence in a portion of a thousand, two, ten, twenty thousand years before; so, if the Ages of Mankind were infinite, it might never have pre-existence before, though the whole Race of Mankind had been industriously addicted *ad ultimum posse* to have discovered or improved Artificial Inventions.

3. The third Allay to the concludence of this Argument is this: That Mankind have been, and in many places are very remiss and unactive in improving their knowledge and discovery of things Natural and Artificial; and that which befalls one Man, or Age, or Place in this kind, may befall another: This may happen by laziness and sloth, by an evil custom, or by overflowing barbarousness and want of improvement by Education: And upon this account we find a great want of Arts and Inventions in the Western World, in *Africa*, and even nearer hand among the *Irish:* And if now by the accession of Planters of better Education, or by the advanced Industry of some Inhabitant of those barbarous Countries there should be derived among them the Inventions of profitable or curious Arts, we could not with any sufficient reason conclude that the World lately began in those Countries, because the Original of those Arts and Inventions was but lately begun among them. If therefore those People by reason of their Barbarous course of life might be strangers unto Arts and Inventions for the space of five hundred or a thousand Years, why not for a much longer time? why not eternally? Since the very same supineness and negligence might as well possess those Parts and Inhabitants for many Ages, as well as few; and for interminate Ages, as well as certain: and if at this day they should discover and practise new Arts and Inventions, it were no greater Argument against the Eternity of their Succession, than against their Continuance for those many thousand Years, which probably they have had in that unknown Western World.

4. The fourth Allay of this Observation seems to be this: That as in Kingdoms and Empires, so in Discoveries of Arts there seem to be very great vicissitudes and circulations, which strangely vary the Faces of Things and Countries; and this principally done, 1. By Wars and Victories: 2. By Floods, Inundations, or Epidemical Diseases and Plagues.

The Instances of the former are various. The *Romans* were a People civilized and improved into great Knowledge in Arts and Sciences, and in Civil and Military Government; and where they prevailed in Conquests and Victories, they did together with their Victories transmit Arts, Sciences, and excellent Methods of Government among even Barbarous Nations, which quite altered oftentimes the former Face of those conquered Countries, and by that means those Arts which were not known before in those Places, became in use and request in those Countries wherein before they were strangers: not as if they then began, for they had

had their Practice and Uſe long before among the *Romans*, though their tranſmiſſion and derivation into thoſe Countries that were conquered ſeemed new.

Again, ſome Countries were *benè morati*, well diſciplined in Learning, Arts, and Knowledge, but poſſibly by the Irruption of numerous Armies of Barbarous People, thoſe Countries were quickly over-grown with Barbariſm and deſuetude from their former Civility and Knowledge, and degenerated into the Ignorance and Barbariſm of their Conquerors; ſo that in a reaſonable Period of time much of their ancient Knowledge and Arts was forgotten, as if they never had it. This was the condition of *Greece* the Learned Part of the World after their ſubjugation by the *Turks*, and this poſſibly may be the condition of *China* in a few years after the great Irruption and Devaſtation by the *Tartars*; wherein poſſibly if an Age or two hence the ſtate of things ſhould be judged according to the preſent appearance, it would be looked upon as if it had never been the habitation of thoſe Curious Arts which ſome time dwelt there: and poſſibly the ſetting on foot ſome of thoſe very Arts that were once well known in thoſe parts, would be looked upon as the *Natales* of thoſe Arts, or the firſt Inchoation of them, Wars and Deſolations having obliterated the Monuments of their former practices; which yet nevertheleſs would be in truth but the reviving of thoſe Arts which were long before practiſed, though intermitted and interrupted by the viciſſitudes of Wars.

And upon the ſame account are thoſe alterations that have hapned in the condition and ſtate of People by other accidents, as Inundations, Epidemical Diſeaſes, Corruption of the Air in ſome Parts and Continents, either by ſome eruption of pernicious Vapours, or other Inclemency of the Heavens. *Plato* in his third Book *de Legibus*, in the beginning, though he ſuppoſe an interminate Beginning of Mankind, and that there were ſucceſſively Cities, Laws, and Arts; yet he ſuppoſeth that upon theſe and the like Occurrences, thoſe that eſcaped theſe common Calamities betook themſelves to the Mountains, kept Sheep, and preſerved the *Species* of Mankind; but moſt of thoſe Arts and Sciences which formerly were common, became diſuſed and forgotten among them: But after Mankind multiplying, they deſcended into the Vallies, and by degrees, mutual converſation, the neceſſity of their condition, and the due conſideration of things did gradually revive thoſe Arts which Men had formerly loſt by long intermiſſion. For ſuch is the *indoles* of the Humane Nature, where it is not ſtrangely over-grown with Barbarouſneſs, that it will by a kind of Natural Sagacity diſcover things, eſpecially neceſſary for the uſe of Humane Life and Society; as Huſbandry, Laws, Government, Architecture, Clothing, and the like; as Bees or Ants provide for their common habitation and ſupply.

Upon all which it may ſeem that we are over-haſty when we conclude, That becauſe Arts or Sciences do perchance diſcover themſelves firſt to our view in ſuch Places or Ages, that therefore this was their firſt and primitive production, or that they were never before. For it may very reaſonably be, that thoſe or the like Arts might have been either in other places, and by a kind of migration or circulation be tranſmitted to thoſe new places either by Armies or Colonies deduced hither; or that even among

among the ſame People or Nation theſe Arts were ſometimes flouriſhing, though poſſibly having received ſome intermiſſion by great Accidents and Occurrences, they again do *repullulare* and revive upon the opportunity of Peace, Trade, Commerce and Popular Increaſe. Nay many times it comes to paſs, as is before obſerved, That when People are multiplied, ſo that their places grow ſtrait and narrow, and their ſupplies not proportionable to their number, neceſſity and exigence, it gives an edge to their Induſtry and Invention, and produceth new Diſcoveries of things that were either not known before, or forgotten: And even this one thing hath advanced the *Dutch* to that eminence of Manufacture, Induſtry and Arts, that they exceed the reſt of the World therein.

We may have an Inſtance of this Circulation of Arts even in this Kingdom of *England* in that which is our great Manufacture, namely, Woollen Cloth: It appears very plainly by thoſe ancient Gilds that were ſettled in *England* for this Manufacture, as at *Lincoln*, *York*, *Oxford* and divers other Cities, that in the time of *H.* 2. and *R.* 1. this Kingdom greatly flouriſhed in that Art: but by the troubleſom Wars in the time of King *John*, *H.* 3. and alſo in the times of *E.* 1. and *E.* 2. this Manufacture was wholly loſt, and all our Trade ran out in Wools, Wool-fells, and Leather carried out *in ſpecie*; and the Manufacture, during thoſe Warly times, held its courſe in *France*, the *Netherlands*, and the *Hans* Towns; but by the Wiſdom and peaceable times of *E.* 3. and his fair treating of forein Artiſts, which he invited and entertained in this Kingdom, he regained that Art hither again, which for near one hundred Years had been for the moſt part intermitted, which hath hitherto continued to the great Wealth and Benefit of this Kingdom.

So that we are not to conclude every new appearance of any Art or Science is the firſt production of it, but as they ſay of the River *Tigris* and ſome others, they ſink into the ground, and keep a ſubterranean courſe, it may be 40 or 50 miles, and then break out above ground again, which is not ſo much a new River, as the continuation and new appearance of the old: So many times it falls out with Arts and Sciences, though they have their non-appearances for ſome Ages, and then ſeem firſt to diſcover themſelves where before they were not known, it is not ſo much the firſt production of the Art as a tranſition, or at leaſt a reſtitution of what poſſibly was either before in another, or in the ſame Country or People: And thus ſome tell us that Guns and Printing, though but lately diſcovered in *Europe*, yet were of far ancienter uſe in *China*.

So that notwithſtanding this Conſideration of the late Invention of Arts, or Diſcoveries of things Natural or Artificial, Mankind might have had an infinite ſucceſſion, or at leaſt ſuch a continuance as ſurmounts all thoſe Accounts which the moſt prodigal Computations have given: and that Saying of the Wiſe Man may be verified, *Eccleſiaſt.* 1. 9. *The thing that hath been is that which ſhall be, and that which hath been done is that which ſhall be done, and there is no new thing under the Sun: Is there any thing whereof it may be ſaid, See, this is new? It hath been already of old time before.*

I ſhall here add a farther Conſideration, becauſe it hath a cognation with the Subject of this Chapter.

There ſeems to be very probable Conjectures made touching the Origination of Mankind, becauſe there ſeems to be one Radical Language from which all others have their derivation, though ſome carry in them more, ſome leſs Memorials of their Original, as they were more or leſs remote in their Inception.

The Languages of the World may be aptly enough divided into the *Primo primæ*, the *Primo ſecundæ*, and the *Secundo ſecundæ*.

The Language which I call *Primo primæ* muſt needs be but one, if the Original of Mankind were but two common Parents of either Sex, as the Holy Scriptures teach us; and this one Language they muſt needs learn either from a conformation of Voices by the Angels, ſuch might that vocal Language be between Almighty God by the miniſtration of Angels, and *Adam*, whereof we read in the firſt and ſecond Chapters of *Geneſis*; or it muſt be an inſtituted Language, choſen by *Adam* in *Paradiſe*, by which he gave the ſeveral Beaſts their names, and maintained diſcourſe with GOD, and the Woman with the Serpent: For although it is as natural to Mankind to expreſs their Deſires, Paſſions, and Conceptions vocally, as it is for Brutes to uſe their natural vocal Signs, though of a more ſimple and imperfect kind; yet the forming of Languages into this or that particular faſhion or mode, whereby Conceptions may be rendred intelligible to others, is a buſineſs of Inſtitution, Diſcipline, Intention and Conſent. But what this firſt Language of our firſt Parents was, is difficult for us to determin: ſome think it was the *Hebrew*, and from thence they derive other Languages; others think that the *Chineſes* Language was the Original, becauſe it is the moſt ſimple, conſiſting moſt of monoſyllables, the moſt natural, fitting the apertures and flexures of the Lips and Tongue with the greateſt eaſe, and yet having the greateſt multiplicity and variety of Words; others again contend for the *Scythian* Language as the Primitive: all founded upon conjectural Reaſons.

But when we conſider how ſoon Languages are changed, and what a tract of time there was between the Creation and the Flood, and from thence to *Moſes*, it may be difficult to ſuppoſe that that Language continued ſo long in its purity and integrity; poſſibly if in any Line it continued in its integrity, it might be in the Line and Family of *Noah*, and ſo down to the Confuſion of Languages at the Tower of *Babel*.

But it is hard to determin what that Primitive Language was: the *Hebrew* or *Samaritan* bids faireſt for it, 1. In reſpect of its Antiquity; 2. In reſpect of many Languages, eſpecially of the Eaſt, that ſeem to be derived from it, as the *Caldee*, *Egyptian*, *Phenician*, *Syriack*, *Arabick*, which have a great cognation with it, and derivation, as it ſeems, from it.

And though poſſibly in thoſe Elder times, as in the time of *Abraham*, theſe ſeveral Languages might be but as ſo many ſeveral Dialects of the ſame Language, whereby it came to paſs that *Abraham*, though brought up in *Caldea* or *Aſſyria*, held conference with the King of *Gerar* and the Children of *Heth*, that were *Canaanites*, and as ſome think, uſed the *Hebrew* Language; his Servant alſo readily conferred with *Laban* the *Syrian*: *Iſaac* alſo had conference with the *Philiſtims* and *Egyptians*, yet it is apparent that in proceſs of time they grew into diſtinct Languages, unintelligible each to other: The Sons of *Jacob* underſtood not the *Egyptian* Language when they came down for Corn, *Gen.* 42. 23. neither

did

did they afterward understand ordinarily the *Syrian* Language, 2 *Kings* 19. 26. nor the *Caldean* Language, *Jer.* 5. 15.

But although it be commonly thought the *Hebrew* Language was the common Language of the *Canaanites*, yet it seems hard that the Holy and supposed Primitive Language should be preserved only in the Posterity of accursed *Canaan*, and from them derived to the Posterity of *Abraham* the Holy Seed.

As touching the Language of the *Seres* or *Chineses*, those that suppose it to be the Primitive Language, do suppose that *Noah*'s Ark first rested upon the bordering Mountains of *China*, and that Country first peopled by the descendents of *Noah*; that they were not at the building of *Babel*. But this seems to be but a novel Conceit.

2. The Languages that were *Secundo primæ*, were those that hapned upon the Confusion of Tongues, which the *Jews* suppose to be 70 or 72, from that place *Psal.* 78. vers. 55. *He hath divided the Nations according to the number of the Princes of Israel*, or the *Sanhedrim*; but whether they were so many, or more, or less, is not possible to determin.

Some suppose those Languages which are ordinarily called *Linguæ matrices*, were some of those Languages that arose at the Confusion of Tongues, and are called *Matrices*, because divers other, especially of the *European*, seem to be much derived from them, namely, the *Greek*, *Latin*, *Teutonick*, *Sclavonick*, *Scythian*, *Hungarian*, *Finnick*, *Cantabrian*, *Irish*, *British*, *Arabick*, *Frisick*, *Illyrian*, and *Jarygium*.

But though these are taken to be *Linguæ matrices*, yet much of their Languages seem to be borrowed from *Hebrew* and *Phenician* Language; and though they suppose those *Linguæ matrices* might arise at the Confusion of Tongues, yet they were not totally estranged from that common Language which universally obtained before that Confusion, which some think as before, was the *Hebrew*; some relicks of which Primitive Language were notwithstanding that Confusion retained as Indications and Monuments thereof, as *Bochart* in his *Phaleg*, and out of him Mr. *Gale* in his Book called *The Court of the Gentiles*, endeavours largely to prove.

3. The third sort of Languages, which I call *Secundo secundæ*, are those that have either been derived from those that were *Primo secundæ*, or that have been compounded out of other Languages, or taken up *de novo* of later times, or by all of those ways have obtained in several parts of the World, as the *French*, *Italian*, *Spanish*, *Danish*, *English*, and divers others.

Now if it can be well deduced that there was some ancient Primitive Language that by reasonable Evidence can appear to be the common Root of all other Languages, it is reasonable to conclude, That surely there was some one common Head that was the Beginning of Mankind; for without this Supposition it is hardly possible that there should be a common Language at any time in the World, from which as from a common Root all the Languages of the World should in process of time be derived.

But this Evidence also taken singly, lyes open to some Objections that weaken it upon these Considerations.

1. We have not clear Evidence enough of any single Primitive Language, nor what that Primitive Language was if such there hath been:

there might be in proceſs of time a thouſand ſucceſſive Languages, and many that went before have been loſt, and ſucceeded by others.

2. Thoſe ſimilitudes of Words of one Language which are found in another, give us no ſufficient Demonſtrations which of them was Primitive; the reſemblances of words ſignifying the ſame thing in the *Hebrew* and *Greek* Language prove no more that the *Hebrew* was before the *Greek*, and lent Words to them, than that the *Greek* was before the *Hebrew*, and lent the ſimilitude of Words to them.

3. If we conſider almoſt any Language not before-hand or by ſome after means mancipated to Rules, we ſhall ſcarce find any that contain themſelves in the ſame Articulation, Accent or Pronunciation for the ſpace of three or four hundred Years, but are infinitely varied in proceſs of time from what they formerly were. The *Engliſh* Language that was common and uſual three or four hundred Years ſince, is ſcarce now intelligible by us; yea and the *Greek* Tongue, though a regular Language, and reduced to a Grammatical Canon, yet a good Grammatical *Grecian* can hardly underſtand a Native *Grecian*, nor a Native *Grecian* the other at this day: yea we are told by *Quintilian*, as I remember, that in *Rome* it ſelf in proceſs of time the *Latin* Language was ſo altered, that the Prieſts could not readily underſtand the Hymns compoſed for their Idol-Service by the ancient Prieſts of *Rome*.

4. As ſucceſſion of Ages, ſo variety of places in the ſame Country and Nation gives ſuch variety of Dialects in the ſame Language, that one ſide of a Kingdom ſcarce underſtands the other: witneſs the four Dialects of the *Greek* Language, and the ſeveral Pronunciations of the *French* in ſeveral parts of *France*, and the various Dialects of the *Engliſh* in the North and Weſt that render their Expreſſions many times unintelligible to the other, and both ſcarce intelligible to the Midland: various Provinces of the ſame Kingdom, and that at firſt uſed the ſame Language, in proceſs of time uſe various manners of Pronunciation, which in time alſo alter the ſtructure of the Words as they are ſpoken or written, which in farther proceſs of time alters the Language into ſeveral Dialects, as it did in *Greece* and other places.

5. Every Nation hath a certain humour or diſpoſition appropriate to it, which by a kind of Natural neceſſity frames the very Air of Words, Speech and Accents accommodate and ſimilar to that Natural humour or inclination;

Graiis dedit ore rotundo
Muſa loqui ———

In the very frame of the Speech of the *Spaniard*, *Italian*, *French*, *Dutch*, *welſh*, *Engliſh* we may find a kind of Image of their Complexions and Tempers, ſuiting and framing their Speech, Accents, Tone, Pronunciation: Vowels conform thereunto, no leſs than in their Gate and Geſture; and this very Account would in a little time diverſifie one and the ſame Language in the Mouths of ſeveral Nations, ſo that in a little ſpace they would not be the ſame.

6. Commerce and Trade with forein Nations gives great alterations in Languages, each Country borrowing ſome Words, Accents, or Expreſſions from the other, whereby in a little time it is quite altered, and becomes

becomes a mixt confuſed Language, made up of the Ingredients of ſeveral Languages.

7. As in Clothes, ſo in Words, Phraſes, and Expreſſions there commonly grow new Faſhions, whereby it comes to paſs that the ſame Words and Phraſes that were not uſed, or ſcarce underſtood in former Ages, become in Faſhion, Reputation and Vogue in another Age; and this obtains ſometims from the Courts of Princes, wherein a Word a little in requeſt ſoon grows in faſhion with the Gentry, and from them at the third hand paſſeth over to the Tradeſman or Countryman.

8. Many times the *Literati* and *Scholares* coyn new Words, and ſometimes in common Speech or Writing in their Native Language, give Terminations and Idiotiſms ſutable to their Native Language, unto Words newly invented or tranſlated out of other Languages; which is ſometimes done out of Affectation, ſometimes out of Neceſſity, by reaſon of the want of ſufficient ſignificancy in their own Language; and when ſuch Phraſes or Words come abroad in printed Books, in Sermons or Orations, they become more general, and incorporate into the Native Language.

9. Many Languages of Countries are greatly altered and mingled, and ſometimes totally eradicated and loſt by Invaſions and Victories, or by tranſmiſſion of Colonies by Forein Princes of a different Language. Thus by the chacing the *Britons* out of *England* into *Wales*, their Language was wholly exterminated from hence with them, and by the ſucceſſive Incurſions and Invaſions of the *Saxons*, *Danes* and *Normans*, the *Engliſh* Language grew a kind of mixture of them all, which yet in proceſs of time hath been ſo much varied, that the *Engliſh* that was written in the time of *H.* 1. is not now intelligible.

It is true that thoſe Languages that are not now Native, though ſometimes they were, but are preſerved in Writing or Rules or Canons, have long kept their ſimplicity, as the *Hebrew*, *Greek* and *Latin*, which have been indeed preſerved from being loſt by vulgar uſe, but when a Language once becomes of vulgar uſe, it ſoon loſeth its integrity; thus the *Latin* degenerated into the *Italian*, and the very *Hebrew* and *Greek* more barbarous by much where they are popularly uſed, than in the ancient Writings, wherein they have been preſerved and kept to their ancient integrity.

Conſidering therefore the great inſtability of Languages, the great variations and changes to which they are ſubject, the great alterations that they have had, the great difficulty of finding any Language which (upon grounds barely of Reaſon, without Divine Revelation) we can ſafely call Original, and the great difficulty of deducing other Languages entirely from it: It is hard for us ſingly to lay any weight upon this Inſtance, to prove the Origination of Man upon a meer Moral Account or Topical Ratiocination thereof.

CAP.

CAP. V.

The Fourth Inſtance of Fact ſeeming to evince the Novity of Mankind, namely, the Inceptions of the Religions and Deities of the Heathens, and the deficiency of this Inſtance.

REligion ſeems to be as connatural to Humane Nature as Reaſon, and poſſibly a more diſtinguiſhing property of Humane Nature than it: For almoſt in all ſenſible Creatures, eſpecially thoſe of the more perfect kind, a certain Image or weak Adumbration of ſomething like Reaſon appears, yet we find in no Creatures below Mankind any thing like Religion, or Veneration of a Deity: And thoſe faint Conjectures touching ſomething analogical to Religion obſerved in Elephants, are too weak to give any reaſonable admiſſion thereof in them.

Religion therefore ſeems as ancient as Humanity it ſelf, at leaſt of ſome kind of dreſs or faſhion or other: therefore if we can arrive at the Inception of Religion, Veneration of a Deity, and thoſe Rites, Adorations, and Services that reſult from thence; we have reaſon to conjecture that the Inception of Mankind was not long before.

And becauſe the Inception of Mankind is not doubted by *Jews* or Chriſtians, who acknowledge the Truth and Divine Authority of the Scriptures, that reveal and diſcover the Origination both of Mankind and the World, but the doubt only reſteth among thoſe of the Gentile World; it hath been thought a reaſonable Argument to convince the Heathen World of the Origination of Mankind, by diſcovering the Origination not only of the Religious Worſhip of the Heathens, but even of thoſe very Deities which they celebrated and venerated, and paid that Religious Worſhip unto.

And this Diſcovery of the Origination of their Heatheniſh Deities hath been endeavoured by two Methods: Firſt, by following the ancient Hiſtories of the *Phenicians*, *Egyptians*, *Grecians*, and *Romans*; by which means they have traced up moſt if not all their Heatheniſh Deities to their Original, and their firſt Inauguration into Deities; whereas they were in their original for the moſt part but Men of great Note and Merit or Power in the Ancient World, or ſuch, who outgoing the ordinary rate of Mankind by ſome ſignal Excellence, Learning or Induſtry, were by the admiring inferior ſort of Men tranſlated into the Opinion and Veneration of Gods: and then there wanted not Poets and Prieſts to derive from them a Race and Progeny of Gods, which ſwelled into great Numbers, Pedigrees, and Genealogies of Gods and Heroes, *Theogonia*, which filled the ſuperiour World as Men filled the inferiour World by ſucceſſive Generations: And thoſe Authors that have given us an account of the *Apotheoſes*, the Inauguration of the Heatheniſh Deities and their ſucceſſions, are many; eſpecially, *Diodorus Siculus* in his firſt ſix Books; *Euſebius* in his firſt and ſecond Book *De Præparatione Evangelii*, out of the Ancient Monuments of the *Phenicians*, *Egyptians* and *Grecians*; and *Clemens Alexandrinus* in *lib.* 1. *Stromat.* who gives us an account of the *Apotheoſes* of *Bacchus*, *Hercules*, *Æſculapius*, *Iſis*, *Ceres*, *Serapis*, *Apis* and others, many of them, if not all,

all, having their being and translation into Deities after the time of *Moses*; and from the various Denominations of those Heathenish Deities, some had one Name among the *Egyptians*, another among the *Phenicians*, another among the *Syrians*, another among the *Grecians*; though possibly the Persons themselves were for the most part the same.

Secondly, By carrying up the Original of most of the Ancient Deities of the Heathens, and resolving them into *Noah*, and his Sons and Descendents, deducing by very probable Arguments that *Noah* was *Saturn*, *Chronos*, *&c.* that *Japhet* was *Neptune*, *Ham Jupiter*, *Shem Pluto*, *Canaan Mercury*, *Nimrod Bacchus*, *Magog Prometheus*: *vid. Bochart. in Phaleg*, *l.* 1. *Vossius de Idololatriæ origine & progressu*, *l.* 1. and others that have followed those Learned and Ingenious Authors.

But this Inference of the Recentness of Mankind from the Recentness of these *Apotheoses* and Origination of Gentile Deities, seems also too weak to bear up this Supposition of the *Novitas humani generis*.

1. Because although possibly some of their Heathenish Deities might have been of a late Edition, yet there might be many more that might be ancienter, who either were antiquated and forgotten, or they were translated to other Names and Successors; it faring with Idol Gods as it doth with Words or Languages,

——— Cecidere cadéntque,
Quæ jam sunt in honore vocabula. ——

The lust of Mens Fancies in Propagation of Deities was endless and unsatiable. We are told out of *Varro* that there were no less than thirty thousand Heathenish Gods and Deities of all sorts, which were known in his time; and how many more there might be whose Names and Worship were long before that time antiquated, we cannot easily conjecture: only in all probability they were far more than those that survived. And therefore possibly there might be a Race and Succession of *Apotheoses* long antecedent to those whose Originals we have given us in Ancient Histories. We see how easily the *Roman* Calendar swells with new Consecrations of Saints, and to what a multitude they have grown within less than the compass of one thousand Years; and possibly had the World continued many thousand years before it is supposed to have began, there might have been an interminate succession of imaginary Deities, though many or most of their Names are now unknown, or the times of their Consecrations forgotten.

2. But yet farther, if we should suppose that this course of Idolatry began even shortly after the time of *Noah* and his three Sons, yet it is granted of all hands that the World had stood above 1600 Years before the invention of this kind of Idolatry: So that *ex confesso* this was not the first Religion in the World, neither did this Religion tread upon the Heels of the Origination of Mankind if Mankind was, and was 1600 Years before those Deities were found out; and so this Religion cannot pretend to be coeval with Mankind, nor give us any sufficient Indication of the Recentness of Mankind.

3. But yet farther, it is very apparent that this Veneration of Men Consecrated into Deities was not the ancientest Idolatry, much less the

ancientest

ancienteſt Religion of the World: The Worſhipping of the Hoſt of Heaven, the *Sun*, *Moon*, and Stars was an Idolatry that way far more ancient than this of the Heathen Gods made of Men: and this is an Evidence of the antecedency of that Idolatry of the Stars and Heavenly Bodies, in as much as when theſe new conſecrated Deities were made, they did as it were incorporate and affix them to that more ancient Idolatry, transferring the Names of moſt of their Gods to the Heavenly Bodies or Aſteriſms; as *Saturn* to the Star of *Saturn*, *Mars*, *Venus*, *Mercury*, *Jupiter* to the ſeveral Planetary Bodies; and to the *Sun* and *Moon* a prodigious number of Deities, as to the *Sun*, *Phœbus*, *Apollo*, *Oſyris*, *Horus*, and many more; to the *Moon*, *Diana*, *Hecate*, *Venus*, *Aſtarte*, and many others: So that although we ſhould allow the firſt Origination of thoſe Heatheniſh Deities to have been when Hiſtorians give us an account, and not before; yet the Idolatry performed to the Heavenly or Elementary Bodies, the *Sun*, *Moon*, Stars, Fire, *Æther*, *&c.* might have had a long practice among Men before the Invention of theſe later Deities.

4. But yet farther; in as much as Truth is certainly more ancient than Errour, we have reaſon to think that even before the ancienteſt Form of Idolatrous Worſhip in the World, even that of the Heavenly and Elementary Bodies, there was a True Worſhip of the True GOD, which might continue many Ages before any ſort of Idolatry prevailed in the World. So that it would be too raſh to conclude, That becauſe many of the Heatheniſh Deities had their known Original, that therefore no other Religion anteceded it, or that that Religion ſoon followed the Origination of Mankind.

5. Beſides all this there ſeems in the World, or at leaſt it is very poſſible to ſuppoſe certain viciſſitudes or relations not only in Arts and Sciences, as is before obſerved, but even in the Religions profeſſed, which may obtain ſucceſſively both in Places and Ages according to ſeveral viciſſitudes: We ſee that in the Country of *Paleſtine* ſhortly after the Flood Idolatry obtained among the *Canaanites* and the deſcendents of *Ham*; after that, the Knowledge and Worſhip of the True GOD among the *Iſraelites* for many Ages; and after that, a degeneration of the greateſt part thereof to Idolatry again in the Country of the Ten Tribes, and in a great part among the other Two Tribes: after that a Reformation and Reſtitution of the true Worſhip of God, in the return from the Captivity until Chriſt came; then the moſt ſound and perfect Religion, namely Chriſtianity, obtained for ſome time; then the return of Paganiſm, under perſecuting *Roman* Emperours; then the prevalence again of the Chriſtian Religion, under *Conſtantine* and ſome that ſucceeded him; then Popiſh Superſtition; after that Turciſm and Mahumetaniſm, eſpecially in the parts of *Greece*, *Paleſtine*, *Egypt* and other parts of *Aſia* and *Africa*. Thus various Profeſſions of Religion have had various Viciſſitudes, Revolutions and ſucceſſive Alterations in Places and Ages.

Albertus Magnus, as I remember, with ſomewhat too much curioſity, and ſomewhat tranſported with too much fanciſulneſs towards the Influences of the Heavenly Motions and Aſtrological Calculations, ſuppoſeth that Religion hath had its ſucceſſive Alterations and Seaſons according to certain Periodical Revolutions of the Planets: to the firſt Ages of the World he aſſigns the Preſidency of *Saturn* in matters of

Religion,

Religion, and so downward, according to several successive assigned Periods. These are vain Conjectures, but they serve to explain what I mean, namely, That there may be successive Alterations and Changes in the professed Religion of the World in successive Ages, and successively in the same and other places of the World; whereby it will be hard to determin the *Epocha* of the Commencement of Mankind by any one Form or Shape of Religion professed in the World; for there may be some Religion antecedent to that which to us in this Age appears to have been the ancientest; but still with this probable Conclusion, That since Truth is more ancient than Errour, it seems, that if there were any Religion that was Primitive in the World, it was the true Religion and true Worship of the true God, and not Idolatry, or worshipping of Men or Idols, or the Works of Nature: and consequently, that although we had no Monuments extant of any Religion ancienter than Idolatry, yet we had no reason to conclude that that Idolatrous Religion was the most ancient, or coeval to the Origination of Mankind: but rather, that Mankind had an Existence in the World much antecedent to such Idolatrous Worship, wherein the true God was for many Ages and Generations truly worshipped; and that partly by the subtilty of the Enemy of Mankind, partly by the apostacy and corruption of Humane Nature, and partly by the gradual decay of that true and ancient Tradition of the true Worship of the true God, Idolatry and Superstition prevailed and obtained in the World.

So that although it be a most certain Truth that Mankind had an Origination, and was not without Beginning, yet the Evidence of the Origination of their Idolatry and Idolatrous Deities, is no sufficient Proof or Evidence of the Origination of Mankind.

CAP. VI.

A Fifth Consideration concerning the Decays especially of the Humane Nature, and whether there be any such Decays; and what may be collected concerning the Origination of Man upon that Supposition.

THis Argument hath been excellently handled by Dr. *Hakewell*, I shall therefore be the shorter in it, yet somewhat I shall say concerning it.

Some of those that have been inquisitive into the Nature of Man have observed two things, which if they were true, would certainly give us an irrefragable Argument against the Eternal Succession of Mankind, *viz.* 1. That the Ages of Men grow gradually shorter and shorter: 2. That the Quantity of Humane Bodies was ordinarily heretofore much larger than they are now, and by a kind of gradual decay of that Natural Vigour and Strength they decline to a smaller Stature. Thus *Plutarch inter placita Philosophorum* tells us out of *Empedocles*, *Nostræ ætatis homines priscis comparatos infantium instar esse*; and yet *Empedocles* lived

upon the point of 2000 Years ſince, and *Plutarch* near 1500 Years ſince: and *Pliny* in the 7th Book of his Natural Hiſtory, *cap.* 16. tells us the ſame, *In plenum autem, cuncto mortalium generi minorem indies fieri propemodum obſervatur, raróſque patribus proceriores, conſumente ubertate ſeminum exuſtione, in cujus vices nunc vergat ævum*; and ſome Inſtances are given there and by the Additional Notes thereupon, of the great Sceletons of Mens Bodies found in ſeveral Ages, and that, *Jam ante annos mille vates ille Homerus non ceſſavit minora corpora mortalium quam priſca conqueri.*

And indeed if this natural Decreaſe of the Ages of Mens Lives and their Bodily Statures had held ſuch a proportion, it would not only avoid the poſſibility of an Eternal Succeſſion of Mankind, but would alſo give us a very late *Epocha* of their firſt Origination: For a very ancient Original, accompanied with ſuch a natural Decreaſe of Age and Stature by reaſon of that inſenſible but unintermitted decay of the ſtrength and ſtature of Nature, would have long ſince reduced Mankind to be but *Ephemeraes* in duration, and little other than Inſects in extent, or rather wholly determined and put a Period to the whole *Species* infinite Ages paſt.

But it ſeems that theſe are miſtaken complaints both of *Empedocles* and *Homer*; for ſurely in ſo great a Period as 2000 or 1500 Years elapſed ſince the death of thoſe Men the experiment of that Decreaſe would have been much more obvious and obſervable than we find it at this day. And although the nature of Mankind and of other Creatures ſubject to corruption, if left to it ſelf without the continued *Subſidium* and Influence of the Divine Providence, would ſoon have faln into diſſolution *per ſaltum*, and without the inceſſant and corroding invaſions of ſo long a time; yet that ſame Power that firſt gave Being to things, hath ſupported their ſucceſſive Generations in the ſame ſtate and natural vigour that it ever had, abating thoſe accidental occurrences that Sin, Exceſs, and other occurrences have brought into things.

Firſt therefore as touching the Decays of the Age of Man's Life; we do indeed learn from the Sacred Scripture (for no Humane Hiſtory reacheth ſo high) That the Lives of the Ancients were very long, eſpecially before and for ſome time after the Flood; and this the Divine Wiſdom, Providence and Goodneſs ordered for moſt excellent Ends, namely, the Peopling of the New World; and that without any other means than his own Will, or at leaſt by means unknown to us: in *Arphaxad* the Son of *Shem* the great Age of the Ancients was cut to halves, namely to 440 Years; and in his Grand-child *Peleg* it was again cut to halves, for he lived but 242 Years; and it is alſo true that afterwards gradually to the days of *Moſes* the Lives of Men became ſhorter and ſhorter, till they fixed in that common Period of the Life of Man of 70 or 80 Years: and although it be true that the Hiſtories of former times give us ſome account of longer Lives of Men, as the Lives of *Moſes*, *Aaron*, *Phinehas* and ſome others, and thoſe mentioned by *Pliny*, *lib.* 7. *cap.* 48. and ſome in our own Experience; yet *Moſes* himſelf ſtates the ordinary Standard of the Life of Man to be 70, or at moſt 80 Years. *Pſal.* 90. 10. 2 *Sam.* 19. 32, 35. And this we ſhall find true upon the conſideration of the Chronological Account of the Years of the ancient Patriarchs and Kings that ſucceeded *Moſes*; as likewiſe of the time that the *Iſraelites* lived in the Wilderneſs, all which that were twenty Years old and upwards

wards at the coming into the Wilderneſs when the Spies were ſent into *Canaan*, which was ſhortly after their coming thither; all theſe I ſay, except *Joſhua* and *Caleb*, dyed within the 40 Years Peregrination in the Wilderneſs: and at this ſtay the ordinary Age of Men hath been for theſe 4000 Years, abating thoſe caſualties either of Diſeaſes or other Accidents that have ſhortned the ordinary complete Ages of Mens Life.

2. As touching the Stature of Men, it muſt be agreed that in former Ages there have been Giants and Men of extraordinary Stature: ſome Inſtances we have in the ſame *Pliny* and other Heathen Authors, and many more in the Hiſtory of the Old Teſtament: But theſe were out of the ordinary and regular courſe of Nature.

But it ſeems that ordinarily in all Ages the Statures of Men have little differed from what they now are, though according to the difference of Climates and ſituations there hath been ordinarily and regularly a difference in the Stature of Men; many times Marſh-Countries, and thoſe that are of a temperate heat, producing Men of a larger ſize than Mountainous or thoſe Parts that are nearer the Sun, as ſome parts of *Spain* and *Galicia*.

And that the ordinary Stature of Mens Bodies is much the ſame now as anciently in the ſame Places or Regions appears by undeniable Experience: 1. The Bodies of the *Egyptians* that have been exſiccated into Mummy, and lain ſome thouſands of Years, are found to have the ſame Stature or very little differing from what they now have; neither could they ſhrink into a ſhorter dimenſion by the length of time, conſidering that the Bones of all parts are joyned in their extremities, and could not become ſhorter without putrefaction, which occurrs not in thoſe exſiccated Bodies.

2. As the firſt practical Rudiments of Arithmetick were taken from the Parts of the Humane Body in the *Numeri primarii* or *Digitales*, ſo in Geometry it is evident that the firſt notation of Meaſures was taken from the Parts of the Body of Man, and very ancient both among the *Hebrews*, *Greeks* and *Romans*, and theſe hold ſtill the ſame proportion as they did anciently.

Theſe Meaſures according to the *Jewiſh*, *Arabian* and *Egyptian* Account are as followerh.

6 Barley-corns make 1 *Digit*.

An *Inch* conſiſted of 8 Barley-corns, or which is all one, one Digit and $\frac{1}{3}$ of a Digit.

The *Palm* conſiſted of 3 Inches, or 4 Digits, or 24 Barley-corns, mentioned *Exod.* 25.25.

Spithama, a *Span* conſiſted of 9 Inches, or 12 Digits; the half of a Cubit, namely, the utmoſt extent between the extremity of the Thumb and the little Finger extended to their greateſt dimenſion. This was the Meaſure of *Aarons* Breaſt-plate. *Exod.* 28. 16.

A *Foot* conſiſted of 4 Palms, or 12 Inches, or 16 Digits, or 96 Barley-corns.

A *Cubit*, the interval between the Elbow and the extremity of the longeſt Finger; this was the ordinary Cubit, it conſiſted of 6 Palms, which allowing 3 Inches to a Palm is 18 Inches, or a Foot and a half: *vid. Kircher in Oedipo*, *Tom.* 2. *Claſſ.* 8. where writing of the *Egyptian*

Cubit, *Habet autem omnis Cubitus ſex Palmos, & Palmus quatuor digitos, & Digitus ſex grana hordei.* This was the uſual *Moſaical* Legal Cubit which they uſed in Meaſures of Building; the length of *Ehud*'s Dagger, *Judges* 3. 16. and that meaſure whereby the dimenſions of the Ark are meaſured: though beſides that common Cubit they had among the *Jews* and *Egyptians* two larger ſorts of Cubits, one called *Cubitus Regius*, which was 3 Inches longer than the ordinary Cubit; and the other called *Cubitus Geometricus*, which was double to the common Cubit, *viz.* 3 Foot, or according to others, 6 common Cubits, *viz.* 9 Foot.

Theſe Meaſures according to the *Roman* or *Latin* Account are as followeth.

4 Barley-corns breadth make 1 *Digit.*

An *Inch* [*Uncia*] conſiſted of 5 Barley-corns and $\frac{1}{3}$ of a Barley-corn, or which is all one, the breadth of the Thumb, or, 1 Digit and $\frac{1}{3}$ of a Digit.

The *Palm* conſiſted of 3 Inches, or which is all one, of 4 Digits, or 16 Barley-corns.

Spithama, the *Span* conſiſted of 3 Palms, or 9 Inches, or 12 Digits, or 48 Barley-corns.

Pes, a *Foot* conſiſted of 4 Palms, or 12 Inches, or 16 Digits, or 64 Barley-corns.

Cubitus, a *Cubit* conſiſted of 6 Palms, or 18 Inches, or 24 Digits, or 96 Barley-corns.

Greſſus, a *Step*, two Foot and a half; in *Greek* βῆμα.

Paſſus, a *Pace*, conſiſting of 2 Steps, or of 5 Foot according to the *Roman* Account, but according to the *Greek* Account 6 *Roman* Feet and $\frac{1}{4}$; ſo that the *Grecian* Pace was longer than the *Roman* by a Foot and quarter.

Orgya, or a *Fathom*, the diſtance between the extremities of the Fingers of each Hand, the Arms being extended, which very near anſwers the length of any perſon from Head to Foot; and to reduce it to a certainty, the uſual eſtimate thereof is 6 Foot. *Vide de hac re Danielem Angelocratorem de Ponderibus & Menſuris.*

The uſual Computation according to a *medium* or proportion of the height of a Man is 6 Foot, or a regular Fathom, or 4 Cubits: So *Vitruvius*, *Pes eſt ſexta pars altitudinis corporis, Cubitus quarta:* with this agrees *Kircher*, *ubi ſupra*; *Altitudo humana è quatuor communibus Cubitis Egyptiacis, unus quoque Cubitus ſex Palmis, Palmus quatuor digitis.* So that the ordinary height of a Man is 96 Digits which the ancient *Egyptians* eſtimated to be equal to that Myſtical Cubit among them ſtiled *Paſſus Ibidis*, or the Trigon that the *Ibis* makes at every ſtep, conſiſting of 3 *latera*, each 32 Digits, amounting in all to 96 Digits, the common Meaſure of the procerity of a Man, or 4 common Cubits.

Theſe were the very ancient eſtimates of diſtances taken from the Parts of a Man, and their extent, namely, the Finger, the Thumb, the Span, the Cubit, the Fathom, the Foot, the Step; and theſe were the eſtimates and reduction of them to known and certain Meaſures, and theſe Proportions are ſtill, even in our Age, in Men that are of an ordinary ſtature: The Fingers breadth now as anciently 6 Barly-corns breadth; the 4 Fingers or Palm about 3 Inches; the Span, the Cubit, the Foot, the Step,

Step, the Fathom of the ſame extent and dimenſion now as anciently, and the ordinary eſtimate of a tall Man 6 Foot now as then: Witneſs our Old Statute called *Compoſitio Ulnarum & Perticarum; Tria grana hordei ſicca & rotunda* (*viz.* in length) *faciunt pollicem, duodecim pollices faciunt pedem, tres pedes faciunt ulnam, quinque ulnæ & dimidium faciunt perticam, quadraginta perticæ in longitudine & quatuor in latitudine faciunt acram.* Whereby we have very plain reaſon to conclude that *Empedocles* and *Pliny* were miſtaken touching the gradual diminution of Humane Stature, ſince thoſe Meaſures that took their denomination and extent from the Parts of Men held anciently that extent and length that the very ſame Parts in Men hold in theſe times.

And truly if we look upon the progreſſive Growth and Periods in Humane Nature, as alſo in all other perfect Animals, they hold regularly the ſame ſtate and order as they held in the moſt remote Ages whereof we have any Memorial in Ancient Writings or Hiſtories. The ſame time for the Formative proceſs of the Humane *Embryo* now as is recorded to have been uſual in the times of *Ariſtotle* and *Hippocrates*, *viz.* ordinarily in the beginning of the tenth Month. *Ariſtot. Hiſt. Animal. cap.* 3. & 4. *Hippocrat. de Carnibus, in fine.*

The proportion of Stature the ſame now as anciently; they bred Teeth at 7 Months, *Ariſtot. Hiſt. Animalium, l.* 2. *cap.* 10. ſhedding and new breeding of Teeth at 7 Years, *Cenſorinus de Die Natali, cap.* 14. and again breeding of the *noviſſimi maxillares* or *genuini dentes* at 20. *Ariſt. Hiſt. Animal. l.* 2. *cap.* 4. At 5 Years of age in an ordinary growth the procerity is half of that which will be attained at full age, *Ariſtot. de Generat. Animalium, l.* 1. *cap.* 18. though *Pliny l.* 7. *cap.* 16. aſſigns that proportion to *trimatos* or 3 Years of age, but miſtakenly, as it ſeems.

The ordinary Period of the Humane Procreative Faculty in Males 65, or at moſt 70; in Females 45, or at moſt 50. *Ariſt. Hiſt. Animal. l.* 5. *cap.* 14.

The ſeveral Periods of the Ages of the Life of Man according to *Hippocrates* divided into 7, *viz.* at 7, at 14, at 22, at 35, at 42, at 61, and from thence to the end of Life, which at moſt is 81 or 84, upon the greateſt ordinary Account. *Vide Rhodogin. l.* 19. *cap.* 21.

So that although the Humane Nature, as to that part of it that is Corporeal, is ſubject to changes and corruptions, and not of ſo firm and ſtable a conſiſtence as the Heavenly Bodies, and conſequently not ſo capable of a permanent and fixed conſtancy and continuation as they; yet by the conſtant and unintermitted Influx of the Divine Providence this corruptible and mutable Nature of Mankind, yea and of the other perfect Animals, is admirably preſerved in the ſame meaſure of extent, regular procedure, and length of duration, as it hath been many Thouſands of Years ſince. Indeed it may be poſſibly true, that Accidents, accidental Occurrences, Intemperance, ill and noxious *Effluvia* from the Earth, Waters, and intemperature of the Air, and other Accidents may in theſe latter Ages of the World produce ſome ſuch Diſeaſes and accidental Diſorders as may poſſibly more infeſt Mankind, and occaſion more Mortality than in former Ages. But as to the regular and ordinary courſe of Natural procedure and ſtate of things with Mankind, yea and other Animals, there ſeems to be little or no decay or variation from what hath been formerly

formerly (abating that Concuſſion which the Perfection of the Humane Nature ſuffered by the firſt Fall, and the ſhortning of Mens Lives, which is of another Conſideration.)

And therefore I am not ſo apt to attribute that firm Conſiſtency of the Heavenly Bodies, their conſtant uninterrupted and invaried Motion, and thoſe other Indications of Permanency and Perpetuity, barely or ſingly to the ſingular and indiſſoluble Texture of their Nature or Compoſition, as to that inceſſant Influx and unintermitted Cauſality of the Divine Power and Providence, which I ſo plainly ſee conſerves almoſt an equal regularity in the Motions, Proceſſes, Succeſſion, and Condition of poor, frail, Sublunary Bodies, which in their little Period belonging to their ſpecifical and individual Nature, have the ſame regularities and orders now as formerly, and in the whole Syſteme of their ſpecifical Nature preſerved in the ſucceſſive Individuals for many thouſands of years, obtain the ſame regularity, order, and method of Exiſtence, without decay, as it hath always held.

This Suppoſition therefore of the gradual decay of the ſtate of Humane Nature, though *in hypotheſi* it would ſtrongly infer a late Origination of Man, yet it is falſe *in theſi*, and ſo concludes nothing touching the Argument in hand, namely, the Origination of Mankind in ſome determinate Point of Finite Duration.

An Ingenious Perſon, in a new Eſſay of Natural Philoſophy, Entituled, *New Principles of Philoſophy*, *Part.* 2. *Cap.* 22. tells us: That the Sun or Fiery Region gains gradually upon the Inferior Elements, ſo that the greateſt Declination of the Sun in the time of *Hipparchus* and *Ptolemy* was obſerved to be 23 *deg.* 52 *min.* but is ſince found to be reduced to 23 *deg.* 30 *min.* or 28 *min.* which is a neceſſary Conſequent of the Suns gradual approximation towards the Earth: And if that ſhould be ſo, it were a neceſſary Argument of the Origination of the World, and with it of Mankind, within a certain Period of Time. But we muſt not be over haſty in allowing of that Poſition; for every Day gives us Inſtances how difficult it is exactly to find out the Diſtances of the Heavenly Bodies, Lines, and Motions, eſpecially when we come to meaſure them by Minutes, or Parts of Minutes, which cannot be effected but by Mathematical Inſtruments, which can never reach to a perfect exactneſs in this nature.

CAP. VII.

The Sixth Evidence of Fact proving Novitatem generis humani, *namely, The Hiſtory of the* Patres familiarum, *and the Original Plantation of the Continents and Iſlands of the World.*

IN Profane Authors and Hiſtorians we may find the Roots and Founders of many Kingdoms, Monarchies, and States, either by Victories, or by Emigrations, or by Inteſtine Commotions, or by common Conſent of the People or Inhabitants: Thus we find the Foundation of the later States or Monarchies in that Conſtitution at leaſt wherein they now ſtand,

or

or in some former Ages stood: As the Foundation of the *English* Monarchy in the *Norman* Conquest; and before that, the Foundations of the *Saxon* and *Danish* Monarchies in this Kingdom, in the old Histories of *Hoveden*, *William* of *Malmshury*, and others. The like might be found for the Foundation of the *French*, *Spanish*, and *Danish* Kingdoms, the Empire of *Germany*, of the *Grand Seignior*, and others. And ancienter Histories give us an account of the Foundation of the *Roman* Empire in *Romulus*, of the *Grecian* in *Alexander*, of the *Persian* in *Cyrus*, of the *Babylonian* in *Nabonassar*, of the *Assyrian* in *Belus*, *Ninus*, *Semiramis*. But yet, as is formerly observed, the Discovery of these Originations of Civil Coalitions into Kingdoms and Empires, do not lead us up to the Origination of Mankind, in the material Constituents of these Kingdoms and Empires; for the Men that made up these Civil Bodies, or at least their Ancestors, had a Being before, though perchance under a different form of Civil Government, or under some other Names or Governour: As the several States of *Greece*, before their coalition into one Kingdom under *Alexander*, or *Philip* his Father, subsisted in several smaller Principalities or Commonwealths. For these kind of Histories, though they afford us the Inception of new Governors or Governments, the *Capita Regiminum*, yet they give us not the *Capita Familiarum*: For though *Romulus*, for Instance, laid the Foundation of the City and Monarchy of *Rome*, and became as it were the Parent of that City and State, yet he was not the Parent of the Men that were the material Constituents of it, for they were a *Farrago*, or Collection of many people that had their Existence long before in themselves or their natural Progenitors. And upon the same account it is, that although many Histories, as *Diodorus Siculus*, *Thucidides*, *Herodotus*, and others, do give us some true and some fabulous Derivations of the Names of Places or Countries, from the Men that seemed to be the Heads or Roots of those Denominations, yet though they should be all admitted to have truly given those Denominations to those Countries, it doth by no means follow, that they were the Parents of the Inhabitants thereof; but they were such, as either by War, or Power, or Election of the People, presided in those places, and gave them thereupon their denomination. Thus they tell us, That *Helen* gave the denomination to that part of *Greece* which was called *Helenica*, and those *Grecians* were called *Helenistæ*. *Pelasgus* was he that gave the denomination to the *Pelasgi*, another part of *Greece*. *Latinus*, to *Latium* and the *Latins*. *Danaus*, to another Cept of the *Grecians*. *Tenes*, the Son of *Cygnus*, to *Tenedos*. *Cretas*, to *Creta* and the *Cretians*. *Italus*, as some say, to *Italia* and the *Italians*. *Romulus*, to *Rome* and the *Romans*. And infinite more such Allusions of Denominations of Countries and People, from the Name of him that presided either in the Army, or Colony, or Countrey unto which such Denominations were after given: And yet *Latinus*, nor *Pelasgus*, nor *Cretas*, nor *Helen*, were any more the Natural Parents of all those persons that were called *Pelasgi*, or *Cretenses*, or *Helenistæ*, or *Latini*; than *Romulus* was the Natural Parent of all those people that were the first Inhabitants of *Rome*, or of those that were after Incorporated and Infranchised into that Name, City, or Government. Indeed these were such persons, as perchance were the Captains of those Armies or Colonies that were commanded by them,

or

or were such as were the Heads or Founders of the Monarchies or Kingdoms that they thus founded; or such as did *sustinere nomen & personam totius communitatis*, and thereby had the Power and Priviledge to give a Denomination to those Countries or People they governed, calling them after their own Names: But they were not the Natural Roots, or common Natural Parents of all them that bore their Denomination, though it may be very likely they had some Children of their own which might participate in that common Denomination.

This therefore singly considered, namely, the Denomination of People from some one Person, is not sufficient to assure us that all those Persons that bore that Denomination were derived by Natural Propagation from him whose Name they so bear; but though it may be true that such a Denomination may be communicated to such only, as descended by Natural Propagation from him, as I shall hereafter instance, yet it may be otherwise: Therefore I have no reason to conclude, That wheresoever I find a Society of Men bearing the Denomination of one Man, that that Man was the Natural Parent of those that bear that Denomination, unless I have some better Evidence than Allusion of Names, since it is apparent in these Histories that it is otherwise.

Upon this Reason it seems plain, that it will not be possible from any Prophane History to find the Original Parents of any one Kingdom, much less of Mankind. It is very evident indeed, that by help of a continuation of Prophane Histories or other common Monuments well kept together, the Genealogies and Ramifications of some single Families even to a vast and numerous extension may be preserved. But that will not do the business that I intend. For it is rare, and beyond Example in any Author that I know, that the entire and complete Pedigree of the whole Descendents of any particular Family is deduced down through the space of a thousand Years last past; whereas such Instances as must serve my turn must be such as are at least five thousand Years old, or otherwise I shall fail in the application of this Topick now in hand to the Matter in question.

It remains therefore that for Instances of such Antiquity useful to my purpose I must resort to the ancientest History, namely, the History of *Moses*, which as it is a History of the ancientest Times and Occurrences in the World; so it is a History that was written at the greatest distance from this Time, and nearest to the Times and Things whereof he writes; no History in the World being so ancient as this by near eight hundred Years, for so long lived *Moses* the Author of this Book before *Homer* the first Prophane Historian that is extant.

And if any Man shall object against the competency of this Instance, 1. Because the same *Moses* whom I use in this Topick is the person that asserts the thing *de quo ambigitur*, namely the first Production of Mankind, and therefore that he is incompetent in this Case: 2. Because all that urge the Testimony of *Moses* urge him as infallible, divinely inspired, and so whatsoever he saith must not be contradicted; and upon such a Supposition there were a compendious way of evincing the Question in hand of the Inception of Mankind, by telling us that *Moses* who wrote by an infallible Spirit and Inspiration, tells us that Mankind was Created by GOD about 6669 Years since according to the *Seventy*;

and

and so there needs no farther Reason, nor can be any farther Controversie touching it.

To this I shall say these things: That although it is certain that *Moses* was Inspired by an Infallible Spirit in what he wrote, and that he doth in plain terms tell us that Man was at first Created by Almighty God, and therefore to me or any else that is satisfied of the Infallible Authority of the Holy Scripture, this is sufficient to satisfie that the truth is as *Moses* hath informed us, and there needs no other Argument to support my Faith of the truth hereof: yet because I am writing of those Natural and Moral Evidences of this Truth that may be of strength enough to evince the truth of this Assertion, upon the apparent Moral Evidences of the credibility of the Writings of *Moses*, I shall here urge the Authority of *Moses* for the Proof of the Matters of Fact in question as I would urge *Herodotus* or *Livy* to prove a Matter of Fact alledged by them; and at this time and in this Dispute shall only use his Testimony as a Moral Evidence of the Truth he asserts, as an Evidence of Credibility. And as I shall not exact a Subscription to the Truths he delivers upon the account of his Infallibility, so it is not reason to deny that Credibility of what he relates, which would be allowed to a Prophane Author; especially when it carries with it singly, without the contribution of the Supposition of a Divine Authority, as great an evidence of truth as any History in World besides.

And as to that which is said, That the Supposition of the truth of what *Moses* asserts, is to suppose the thing controverted, because *Moses* asserts the Creation of Mankind: I say, 1. That I shall not at all instance in that Assertion as to determin the Question, but only so far forth as it is a Moral Evidence of the truth of it; namely, That this was a thing believed near 4000 Years since by Wise Men, such as *Moses* was, and by them that were much nearer to the time wherein the Origination of Mankind and those other Matters of Fact that are contributory to the Proof thereof was transacted; and therefore in common Reason must needs have a clearer Tradition and Evidence of the truth in this matter than the Ages so many thousand Years after; but this I shall reserve to its proper place. 2. In this place I shall not at all insist upon the Tradition of *Moses* touching the Creation of Man, but only upon those Historical Narratives delivered by *Moses* relating to such Matters of Fact that were nearer his time, and such as he might very reasonably know and deliver as an Historiographer; namely, the Propagation of Mankind after the Flood, and the Reduction of most of the considerable Nations of the World to their several Roots or Parents by Natural Propagation, and the credibility of his Relation touching it: Though even the credibility of this Relation of his gives a great Evidence and Attestation, even upon a Moral account, to what he writes touching the Creation of Man, and those parts of the History antecedent to the Flood.

The Sum therefore of the *Mosaical* History that I shall in this place make use of, is this:

1. That a Universal Flood was brought upon the Earth in the Year 1656 after the supposed Creation of Man according to the *Jewish* Account, although the *Septuagint* allows a longer Period between the Creation and the Flood.

2. That by that Universal Flood all Mankind were destroyed except eight persons, namely, *Noah*, his Wife, his three Sons, *Shem*, *Japhet*, and *Ham*, and their Wives.

3. That all the Race of Mankind after this Flood, were derived by natural generation from these three Sons of *Noah* and their Wives.

4. That the particular Descendents from these three Sons of *Noah*, are truly described and set forth in the 9th, 10th, and 11th Chapters of *Genesis* by their several Names, and drawn down from that Root to the filling and peopling of the whole Earth: *Gen.* 32. *These are the Families of the Sons of* Noah, *after their Generations, in their Nations; and by these were the Nations divided in the Earth after the Flood.*

5. That after the Flood, in the time of *Phaleg*, the Languages of the World, especially of the Families of *Cham* and *Japhet*, were confounded, and the Nations proceeding from these Families dispersed.

6. That the Family of the *Israelites* was deduced through these ensuing Patriarchs, *viz.*

Sem.
Arphaxad, born two years after the Flood, *Anno mundi*, 1658.
Salah.
Heber.
Peleg.
Reu.
Serug.
Nahor.
Terah.
Abram.
Isaac.
Jacob marries *Rachel* and *Leah*, *Anno mundi*, 2192.
Levi, and the *Twelve Patriarchs.*
Kohath.
Amram.
Moses, born in the Year of the World, 2373.

So that from the Flood to the Birth of *Moses* the Descendents from *Jacob* grew into a great Nation, for in the 80th Year of *Moses* Life the Males of the Children of *Israel*, that were above 20 Years old, were above 600000, besides the *Levites*, and besides Women, and Children that were under 20 Years old, *Numb.* 2. 32. and this great Increase of this People happened within the compass of about 260 Years. And thus, according to the *Jewish* Account in the Holy Text, the Period between the Flood and the *Exitus* of the People out of *Egypt* was about 800 Years: But indeed the Account of the *Septuagint*, partly by the Intersection of *Cainan* in the Genealogy, and partly by adding 100 Years to that *Technogonia* of the Patriarchs before *Abraham*, have made the Period larger by 884 Years. So that according to that Account, the *Exitus ex Egypto* was at least 1684 Years after the Flood.

Now this History of *Moses* of the peopling of the World by the Posterity of *Noah*, doth these two things:

1. It gives us an Account of the Original of all the Nations in the World, not from bare allusion of Names, nor from bare Coalitions into Civil Societies in which they were formed, as *Romulus* was the Founder of

of the *Populus Romanus*, and *Pelasgus* of the *Pelasgi*; but it gives us the Account of their Origination by Propagation from the Natural Roots and Parents of them. 2. Although notwithstanding this Instance, it may be possible, that though the Natural Derivation of all Mankind was from *Noah* and his three Sons, yet the Progenitors or Ancestors of *Noah* might have no Original, but might be Eternal, according to the *Hypothesis* of *Aristotle*: yet when I find the same Author that gives me an Account of the Derivation of all the World from *Noah* and his three Sons, and that with most clear evidence and credibility, it gives me a very great Moral Evidence of the truth of his Relation touching the first Origination of Man by Creation: For doubtless both were derived to him by a constant Tradition from those from whom he was descended, and it is not reasonable to suspect the truth of the one, since we have a strong Moral Evidence for the truth of the other; namely, the General Flood, and the preservation of *Noah* and his Family, and the derivation of all Mankind from him and his Sons: He that hath sufficient reason to believe the History touching the latter, will have little reason to doubt the truth of the Relation touching the Origination of Mankind; which as in it self it seems reasonable, and no other possible Supposition to compass it but by a Supernatural Production, so it hath a most excellent congruity with the subsequents of the Holy History touching the Descendents from the first Man, the Flood, and the Re-peopling of the World from *Noah*.

Now the Moral Evidences of the credibility and truth of this History are these:

1. *Moses* that wrote it, had the best opportunity that could be to give a true Narrative of this Fact touching the Flood, and the Productions of Mankind by Generation from the Children of *Noah*: For, 1. It is evident by the Writings of this Man that he was a very Learned knowing Man, inquisitive after all sort of Learning; a Man in great Power and Esteem in the Court of *Egypt*, and after that a great Governour of a very great People, which he governed with admirable Wisdom; and by this means had opportunity to furnish himself with all Monuments and Evidences of Antiquity that might be conducible to the Discovery of former things, and his Learning, Judgment and Ability to make an excellent use of these helps was also remarkable. Again, 2. He lived not far remote from the transaction of these things that he wrote, in comparison of the Writers or Historians of after Ages: He dyed above 500 Years before *Homer* lived, which yet is the ancientest Historian that *Greece* affords, and he lived within the Period of 800 Years after the Flood and the division of the World among the Posterity of *Noah*. *Livy* and other Historians give us an account of the Affairs of *Rome* for above 600 Years before they were born, and many other Historians for a much longer time, and we give them credit; and certainly such an Occurrence of such remark as the Universal Flood and the Re-peopling of the World must needs be fresh in memory for such a Period of about 800 Years; especially considering that the Peopling of the World was a gradual and successive business, that must needs preserve its Memory even upon its own account, for it was still current, and many were concerned in it in the preservation of the laying the first Foundations of their States and Republicks. 3. As the Period or distance of time was not great, so if we consider

the longevity of Mens Lives in thoſe times, the Period was not much longer than three Generations, and ſo the Tradition of things might be preſerved freſh and certain unto the time of *Moſes* without any great difficulty: For *Shem* that was an Eye-witneſs of the Flood was contemporary with *Abraham*, *Abraham* was contemporary with *Jacob*, *Cohath* the Son of *Levi* was contemporary with *Jacob*, and with *Amram* the Father of *Moſes* and Son of *Cohath*: So that the Tradition of the Flood, and all that ſucceeded, might be handed from *Shem* to *Abraham*, from *Abraham* to *Jacob*, from *Jacob* to *Cohath*, from him to *Amram*, and from him to *Moſes*. 4. Beſides all this, without any more Hands in the delivery of it over, it appears that *Abraham*, *Iſaac*, *Jacob* were great Men, had great Families and Wealth, were Men of great Note and Obſervation for their Learning and Knowledge, Men that had great Expectations, having a Promiſe of that Land to be given to their Poſterity; and although they kept Sheep and Cattel according to the cuſtom of thoſe Eaſtern Countries, yet they were great Princes, and Men of excellent Education: doubtleſs *Abraham* inſtructed his Son in all the Knowledge that he had received by Tradition from his Anceſtors, the like did *Iſaac*, and after him *Jacob*. And therefore it might very reaſonably be thought that the Traditions of former things were kept freſh and pure in this Line of Men.

And though we have no Writings extant ancienter than *Moſes*, yet probably in his time there might be Books, or at leaſt Monuments and Inſcriptions of things done before his time, which might preſerve the Memory of things paſt as well as our Books do now: For it is not to be doubted but Writing was much ancienter than *Moſes* his time, *Job* ſpeaks of Writing as a thing in uſe in his time, *Job* 19.23,24. and *Joſephus* tells us of certain Pillars erected by *Seth*, wherein the Monuments of Learning and Hiſtory were preſerved, *Joſeph. l.* 1. *Antiquitat. cap.* 2. and *Moſes* mentions Books written by others, either before or in his time.

I very well know that *Moſes* had a greater means to know all thoſe things that to a *Jew* or a Chriſtian are of greater weight than all theſe; namely, the Infallible Conduct, Revelation and Inſpiration of the Divine Spirit: But the truth is, we are faln into an Age of many Chriſtians in Name and Profeſſion, that yet think it below them to believe upon that account without ſome farther Evidence that may ſatisfie their Reaſon; I have therefore ſubjoyned theſe and the following Conſiderations to make it appear, That upon the bare account of Moral Evidence more is to be ſaid for the truth of the Hiſtory of *Moſes* than may be ſaid for the truth of any other Hiſtory of things tranſacted before the life of the Hiſtoriographer.

2. Again, we uſually allow ſuch an Hiſtorian to be worthy of belief, even in thoſe things whereof we have no other Evidence than the Credit of the Hiſtorian, if we find many things delivered by him to have ſo great an Evidence of Truth that they cannot well be doubted by any reaſonable Man. I will admit that *Moſes* delivers many things that were antecedent to him, and can have now no other Evidence than the Credit, Prudence, and Fidelity of the Hiſtorian himſelf; as touching the Derivation of the Nations of the Earth from the ſeveral Sons of *Noah*, and

though possibly when he wrote there was a vigorous and authentical Tradition or other authentick Evidence of the Truth of them, which it may be is now so lost that we have no other Evidence thereof but the bare Relation of *Moses* (this I do for the present admit, though in the sequel it will appear that there are other concurrent or collateral Evidences that assert and attest it) yet it is plain that the same *Moses* writes many things that have so undoubted and so solid a Tradition asserting it, that no Man can doubt it that will not first deny his own Reason. As for instance, Can there be any doubt but that the Family of the *Israelites* were derived from *Abraham*, *Isaac* and *Jacob*, and the 12 Patriarchs; that they were brought out of *Egypt* under the Conduct of *Moses*; that they lived in the Wilderness forty Years, and were there miraculously fed by Quails and Manna, since this was written in that very Time and Age that could and would have contradicted it, if false? Can there be any doubt but the History of his making the Ark and the Tabernacle were true, since both continued for many hundred Years after? Can there be any doubt of the History of the Fiery Serpents, and the Cure of their Biting by the Brazen Serpent, which continued in the Wilderness until the time of *Hezekiah*, which was many hundred Years after, with an unquestionable Tradition of the reason of its Making? Can there be any doubt whether he divided the Land of *Canaan*, in such manner as is set down, in his life time, namely, to the two Tribes and a half on the farther side of *Jordan*; and his Prescripts for the future dividing of the rest, since it was enjoyed according to those Prescripts for many hundreds of Years after, and part of it until the coming of Christ? Can there be any doubt that he gave those Laws Moral, Judicial and Ceremonial recorded by him, since those very Laws have been for the space of near two thousand Years the very Rule and Model by which the Sacred and Civil Concerns of that People were always ruled and governed, and that in contemplation of the same Law that was given by the Hand of *Moses*, and so recorded in his Books of *Exodus*, *Leviticus*, *Numbers* and *Deuteronomy*? I say we have not greater Evidence that there was such a Man as *Alfred*, *Edward* the Confessor, or *William* the Conqueror; or that there were such Laws of the Confessor, such a Survey of *England* called *Doomsday* made by *William* the Conqueror, such an Abbey founded by him in Memory of his Victory in *Sussex* called *Abbatia de Bello*; such Laws made by *H.* 1. as are transcribed in the Red Book of the *Exchequer* under that name; such a Charter of King *John* made at *Reningmead*, or such a Charter as *Magna Charta* made by King *H.* 3. than we have that there were such Laws, such Distributions of the Land of *Canaan*, and such things done in *Egypt* and the Wilderness as are recorded by *Moses*. The Moral Evidence that ariseth from this Consideration is this; That since in these things that are capable of an incomparable Evidence of Credibility in respect of the time wherein they were done (though very ancient, and exceeding the Age of any other Author) we find such indisputable Evidence of Truth, we have reason to give credit to the same Author relating the Derivation and Beginning of Nations from the Sons of *Noah*, though in respect of the greater Antiquity thereof we have not any other concurrent Testimony but that of *Moses*: And the rather, though we have not those other Evidences thereof, yet *Moses* might have as

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unqueſtionable Evidences of the things tranſacted between his time and the Flood, which at the greateſt Account was not above 1600 Years, but by the *Jewiſh* Account about 800 Years before his time, as we now have of thoſe things which were tranſacted in the time of *Moſes*, which is above twice 1600 Years diſtant from our time.

3. Beſides the Relation of the Traduction of the ſeveral Nations of the World from the Sons of *Noah*, delivered by *Moſes* in that ſhort Pedigree or Extract, *Gen.* 10. we have very many probable Evidences of the conſent of all ſucceeding Ages to that Genealogy of the World; as, 1. The common Tradition of thoſe Ages that ſucceeded ſhortly after *Moſes*, which commonly eſteemed them ſo deſcended: 2. The Analogy of their ſeveral Names of the Countries wherein *Moſes* ſuppoſed the firſt Fathers fixed, as *Canaan*, *Miſraim* or *Egypt*, *Chittim*, *Aſſur* or *Aſſyria*, and infinite more of this kind which are not needful here to be remembred, ſince *Bochart* and thoſe that have tranſcribed out of him give us abundant Inſtances. Neither is it reaſonable to object againſt this that which is before obſerved in relation to other Alluſions of this kind, namely, That thoſe Denominations of Places might not be ſo much from the Roots of thoſe Nations or Families, or from the Captains or Governors that gave Names to thoſe Countries they conquered; becauſe the Hiſtorian *Moſes* gives us in expreſs terms the reaſon of the Denomination to be from the very Parental Roots of thoſe People or Families: and 2. Becauſe thoſe Heads of Countries or Nations who were nearer to *Moſes* time gave the Denomination to the Countries which in effect they peopled; as *Edomites* to the Poſterity of *Edom*, *Moabites* and *Ammonites* to the Poſterity of the two Sons of *Lot*, *Madian* to the Poſterity of *Abraham* by *Keturah*, and many more: And we have as great reaſon to ſuppoſe that theſe grew and increaſed into great Nations in the time of *Moſes*, ſince the People of *Iſrael* who deſcended from a later Stock than any of theſe within the ſpace of little more than 200 Years, increaſed into ſo great a People, that in their going out of *Egypt* their Males of above 20 Years old amounted to 600000, whereof uſe will be made hereafter.

The late Diſcovery of the vaſt Continent of *America* and Iſlands adjacent, which appears to be as populous with Men, and as well ſtored with Cattel almoſt as any part of *Europe*, *Aſia*, or *Africa*, hath occaſioned ſome difficulty and diſpute touching the Traduction of all Mankind from the two common Parents ſuppoſed of all Mankind, namely *Adam* and *Eve*; but principally concerning the ſtoring of the World with Men and Cattel from thoſe that the Sacred Hiſtory tells us were preſerved in the Ark. And the Objection runs thus:

It ſeems apparent by all Geographical Deſcriptions of this lower World, that the whole Continent of *America* and the adjacent Iſles thereof are no way contiguous to any parts of *Aſia*, *Europe*, or *Africa*, but disjoyned from the ſame by huge and vaſt Oceans; divided from the Weſtern Coaſts of *Europe* and *Africa* by the vaſt *Atlantick* Ocean; from the North parts of *Europe* by the great Frozen Seas lying between it and *Greenland*, which ſeems to be the Northern Coaſt of *America*; from the North-eaſt part of *Aſia*, *Tartary* and *Cathay* by the *Fretum Anian*; from the Eaſt parts of *China* and the *Philippine* Iſlands by the *Oceanus Pacificus*, of above 2000 Leagues breadth, and is divided from the great lately

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diſcovered Iſland *del Fogo* by the Straits of *Magellan*, and that Iſland again divided from the uttermoſt Southern Continent (if any be) by a great Sea, which though not formerly known to the *Europeans* and *Aſiaticks*, being divided from *Aſia* and *Africa* by the great *Indian* Ocean, yet hath been lately diſcovered by *Le Maire*.

It is alſo evident that this vaſt Continent and the greateſt part of the Iſlands near adjacent to it are well ſtored with Men, and Beaſts of all ſorts: *Laetius* in his Diſquiſition touching the Original of the *Americans*, in his 8th Obſervation gives us an account of above thirty Millions of *Americans* deſtroyed by the *Spaniards* in thoſe Parts of *America* that they have uſurped to their own Dominion, which is not the hundredth part of that great Continent.

The Inhabitants of this Continent as they greatly differ among themſelves, ſo they extremely differ from the *Aſiaticks*, *Europeans* and *Africans* in their Language and Cuſtoms, they recognize no Original from theſe Parts: it is true, they have ſome reſemblance of the *Scythians* or *Tartars* in ſome of their barbarous Cuſtoms, and ſome Words they have which ſeem to carry a congruity with Words of other Nations: But theſe are but ſlender Evidences to prove their Traduction from *Aſia*, *Africa*, or *Europe*, eſpecially ſince no Monument is extant that gives an account of their Traduction or Migration thither; and the rather, becauſe it was a World wholly unknown to the *Europeans*, *Africans* and *Aſiaticks*, till the Diſcovery thereof made by *Americus Veſputius* and *Chriſtopher Columbus* which is but of late time.

Again, *Acoſta* tells us in his 4th *Book*, *Cap.* 36. there are divers perfect Animals of divers kinds in *America* which have none of the ſame kind in *Europe*, *Aſia* or *Africa*, as their Pacos, Guanacos, and *Indian* Sheep; and on the other ſide, many *ſpecies* of Birds and Beaſts in theſe Countries which are not found in *America*.

And upon theſe Premiſſes they thus argue:

That ſince by all Circumſtances it is apparent that *America* hath been very long inhabited, and poſſibly as long as any other Continent in the World, and ſince it is of all hands agreed that the ſuppoſed common Parents of the reſt of Mankind, *Adam*, *Noah* and his three Sons, had their Habitations in ſome Parts of *Aſia*, and ſince we have no probable Evidence that any of their Deſcendents traduced the firſt Colonies of the *American* Plantations into *America*, being ſo divided from the reſt of the World, the acceſs thither ſo difficult, and Navigation the only means of ſuch a Migration being of a far later perfection than what could anſwer ſuch a Population of ſo great a Continent: That conſequently the *Americans* derive not their Original either from *Adam*, or at leaſt not from *Noah*; but either had an Eternal Succeſſion, or if they had a Beginning, they were *Aborigines*, and multiplied from other common Stocks than what the *Moſaical* Hiſtory imports.

And although their Traditions in *America* be mingled with ſome things fabulous, yet they ſeem to favour this Concluſion. Some of them acknowledge the Creation of all things by God, and that He fixed certain Arrows in the ground, and from thence the Original of Mankind came. *de Laet. de origine gent. Americanorum*, *Obſervat.* 6. Many of them have a Tradition of a Flood, at leaſt in the Continent of *America*, which

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diſpeopled all the Countrey, and that out of the Lake *Tilocaca* the great God created at ſeveral places the common Parents of Mankind: *ut videre eſt apud eundem, pag.* 115, *&* 105. or that certain Men leapt out of a Cave called *Picare Campo*, or *Tampo*, and were the firſt Parents of Mankind; and therefore they hold the *Tambi* the moſt ancient of Mankind.

Beſides, if we could ſuppoſe that either *ex induſtria*, or by accident ſome might paſs the Seas from *Africa*, *Aſia* or *Europe* into *America*, yet it is not eaſily conceptible how Beaſts, eſpecially of prey, ſhould be tranſported into *America* through thoſe large Seas after the Deluge; neither is it poſſible to ſuppoſe that all the Beaſts of *America*, which are many of them wholly different in kind from thoſe of *Europe*, *Aſia* or *Africa*, ſhould be conducted over the Seas to be preſerved in the Ark, and after be tranſported again thither: and the improbability thereof is ſo much the greater, becauſe many of the perfect Animals found in *America* have none of the ſame kind in *Europe*, *Aſia* or *Africa*, and *è converſo*, but are as it were appropriate to their proper Regions, though ſome there are that are common to *America* and the other Countries on this ſide. And therefore either the Flood was not univerſal, or new Creations of Animals proper to *America* hapned there after the Flood.

I anſwer to theſe difficulties: The Author of the Book called *Præadamita* hath ſet down certain Suppoſitions, which though they ſalve the difficulties, yet they eroſs the tenor of the *Moſaical* Hiſtory, *viz.*

1. That *Moſes* in the Hiſtory of the Creation of Man doth not ſet down the Original of Mankind, but only the Original or common Parent of the *Jewiſh* Nation: that *Adam* was not the firſt Man that was created, but there were very many Ages of Men before him that peopled the greater part of the World long before the Creation of *Adam*: And conſequently, though *Adam* was the common Parent of the Inhabitants of *Paleſtine* and many of the Countries adjacent, yet thoſe that peopled the far greater part of the World, eſpecially the Parts of *America*, were not deſcended from him.

2. That the Flood in *Noah*'s time, though it drowned the Deſcendents from *Adam* and the Countries inhabited by them, namely, *Paleſtine* and ſome of the adjacent Countries, yet it was no Univerſal Deluge, but the far greater part of the World and the Inhabitants thereof were free from that Deluge; and conſequently that *Noah* and his three Sons were not the *Capita familiarum* of the whole Earth, but only of thoſe Families and Nations that were Inhabitants in *Paleſtine* and ſome of the adjacent Countries; and conſequently that many of the Countries of *Europe*, *Aſia* and *Africa*, and the entire Continent and Iſlands of *America* were not overwhelmed with this Deluge, though poſſibly they might have their particular Deluges, as hapned in *Greece* and *Theſſaly* under *Deucalion* and *Ogyges*: and in favour of his Opinion alledgeth the long Computations of the *Egyptians*, *Babylonians* and *Chineſes*; the vaſt Armies of *Ninus*, *Semiramis*, *Zoroaſter* and others, and the great extent of their Monarchies ſuddenly after the Flood; which could not, as he ſuppoſeth, be ſo ſuddenly propagated from *Noah* and his three Sons: But eſpecially inſiſts upon the greatneſs of the Continent of *America* and the Iſlands thereof, the populouſneſs and great ſtore of Men and Animals, which could not be

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in any tolerable probability transported from Countries divided by such great Seas from it.

And likewise he insists upon the Antiquity of the *Egyptian* Computations, and upon that fond Reason of the *Egyptian* Priest in *Plato's Timæus*, That *Egypt* is the most ancient of the habitable World, because neither subject to Total Inundations by reason it hath no Shoars, nor to Conflagration because of the Inundation of *Nilus*: That consequently *Palestine* and the Countries adjacent were only drowned, but the upper *Asia* from whence the Dove fetched his Olive-branch was never thereby totally overwhelmed. This is the principal Subject of his 4th Book of what he calls his *System Theologicum*.

If there were no other fault in this Author, there is this one that renders him inexcusable; In that he in all places of his Book pretends to own and maintain the Truth and Sacred Authority of the *Mosaical* History, and seems to maintain some of his Tenets by Scriptural Suffrage, and yet substitutes such Assertions as any Man, and much more the Ingenious Author himself could not, cannot choose but see, that if they were true would necessarily not only weaken but overthrow the Authority and Infallibility of the Sacred Scriptures; at least where it seems to cross the Fabulous Traditions of the *Egyptian* and *Babylonian* Antiquity, to which Fables he gives more credit than to the Holy Scriptures, and submits the Authority of these to the Authority of those: and while *Judas* like he seems to kiss these Sacred Oracles, he perfidiously betrays their Authority, and draws their Truth as much as he can into suspicion. Such a Discourse had better become a plain professed Infidel, and is so much the worse, in that it is done slily, and by invidious Insinuations, *sub Amici nomine*: If he durst have spoken out, he would have told us roundly and plainly that the Eleven first Chapters of *Genesis* were but Fables; That *Genesis* 3. 20. where *Eve* is said to be the Mother of all living; That *Gen.* 7. 19, 20. where it is said, that all the high Hills that were under the whole Heavens were covered; That *Gen.* 7. 23. where it is said, that every living substance was destroyed which was upon the face of the Ground, both Man and Cattel and Creeping things and the Fowls of the Heaven, and *Noah* only remained alive and those that were with him in the Ark; That *Gen.* 10. 32. where it is said, that these were the Families of the Sons of *Noah* after their Generations in their Nations, and by these were the Nations divided on the Earth after the Flood, are not to be believed, and are but meer Fictions: This had become a Man of his Principles; but he durst not speak out.

I shall not in this place undertake a particular Answer of all that this Man hath said; it is besides my intention in this place to make so large an excursion, and many others have done it to my hand: only I may say thus much, That a Man that gives so much credit to the *Egyptian, Caldean,* and *Grecian* prodigious Traditions, in derogation of that very Scripture which this Man in Complement at least seems to venerate, might have remembred, That the Tradition of the Universal Flood hath obtained in all places, even among the *Americans* themselves, and that the Race of Mankind was thereby destroyed, except some few that were preserved: That the most severe and observing Sect of the Philosophers, namely the *Stoicks*, have constantly held vicissitudes of Destructions of Mankind

by ſucceſſive Deluges and Conflagrations, and a new Peopling of the World ſucceſſively by the Power of God: That *Ariſtotle* himſelf inſinuates thoſe great Viciſſitudes, eſpecially of Deluges in thoſe Periodical great Winters which he ſuppoſeth to have hapned, and for the future to happen in this lower World. But of this hereafter.

And although this Author in his 8th Chapter of his 4th Book gives us a computation of a declivity of 600 Perches from the Fountain of *Danubius* until its fall into the *Pontus Euxinus*, and ſuppoſeth the higheſt Mountains of *Armenia*, whereof *Ararat* where the Ark reſted was the higheſt, doth not exceed the perpendicular height of one Mile above the plain of the Earth; and therefore that an exceſs of 15 Cubits above *Ararat* would not reach the Head of *Danubius*, or at leaſt the upper Plains of the Upper *Aſia*; yet he might have remembred, That though it were admitted, that uſually the heights of moſt Mountains do not exceed a Mile in perpendicular height above their *Baſis*, yet many Mountains are ſituate in the more elevated parts of the Earth, and have the advantage thereby of the height of their *Baſis*: and poſſibly it will be found that the *Baſis* of the Mountains of *Armenia* is ſituate in higher ground than the Fountain of *Danubius* or *Euphrates*. So that an exceſs of 15 Cubits above their height muſt in all probability cover the Plain of the Upper *Aſia*.

Again, he might have remembred that *Egypt*, that from the Authority of the Fable of the *Egyptian* Prieſt is favoured by him with an immunity from Inundation, lyes much lower than the Plains of *Paleſtine*, yea than the Superficies of the *Red Sea* it ſelf: And therefore the Water (that naturally keeps its level, neither without a Miracle can loſe it) which overflowed the whole Continent of *Paleſtine*, even to 15 Cubits above its higheſt Mountains, muſt of neceſſity overflow *Egypt*, which *Ariſtotle* by impregnable Evidences concludes to be one of the loweſt Countries in the World, and the very Production and Accretion of the Slime of *Nilus*: ſo that if the Flood covered *Paleſtine*, nothing but a Miracle could protect *Egypt* from it.

The Author of the Diſſertation *De Ætate Mundi*, *cap.* 12. though he reprehend the *Præadamitæ*, and confutes the extravagancy of their Opinion, yet he ſeems to mince the Univerſality of the Flood: *Nullum itaque relinquitur dubium, quin unum tantum fuerit diluvium, idque univerſale, cujus apud omnes penè gentes extat memoria: Verùm hîc minime probo eorum ſententiam qui totum terræ globum ita aquis tectum fuiſſe exiſtimant, ut nulla prorſus extaret ejus portio; ad hoc efficiendum multa debuiſſent concurrere miracula. Cum enim univerſæ orbis aquæ non ſufficiant ad obruendam tam altè terram, etiamſi omnia maria ſiccentur; debuiſſent vel plures aquæ creari, vel dicendum cum aliquibus, iſtam aquarum molem ex aliis cœli orbibus decidiſſe, & demum finito diluvio ad ſedes ſuas revolaſſe: Verùm hoc eſt piè nugari, Deus non facit miracula ſine cauſa: Quid opus erat mergere terras ubi nec olim fuere homines, ac ne nunc quidem ſunt? Stultum eſt putare ante diluvium adeò multiplicatum fuiſſe genus hominum, ut omnes terræ angulos pervaſerit, &c. Ut verò diluvii inundationem ultrà orbis habitati terminos producamus, nulla jubet ratio, imo prorſus abſurdum eſt dicere, ubi nulla hominum ſedes, illic etiam viguiſſe effectus pœnæ ſolis hominibus inflictæ.*

This indeed ſalves the neceſſity of drowning *America* and the greateſt part

part of the New habitable World, when it extends the Flood no farther than there were Mankind inhabiting, and confines those Habitations possibly within the Circle of *Syria* and *Mesopotamia*. And so all the Brutes that possibly in their first Creation were produced *sparsim* through all the parts of the habitable World, as well in *America* as *Asia* or *Europe*, were safe and untouched; and all those Birds and Fowl that were within 40 or 50 Miles of the *Circulus diluvii* might easily preserve themselves by flight out of the extent of it; yea and the Brutes and Birds which were out of that supposed narrow extent of *Syria* and *Mesopotamia* where the Flood prevailed, might easily refurnish the same Continent after the subsiding of the Flood, without the wonderful and difficult including of their kinds within the Ark for their preservation, which if this Supposition hold, seems a needless Institution and Miracle by the wise God. *Gen.* 7. 1. Therefore, I confess, I am no way satisfied with this Gratification of that Author to the *Præ-Adamitæ*.

For first, although I take this Flood to be somewhat more than Natural, and a thing instituted by the Will of God, yet do I not esteem it a thing purely Supernatural or Miraculous, neither do I suppose those Waters created *de novo*, nor sent out of the Orbs of Heaven to drown the Earth: I do not think the Face of the Earth and Waters were altogether the same before the Universal Deluge, and after; but possibly the Face of the Earth was more even than now it is, the Seas possibly more dilate and extended, and not so deep as now; the Waters possibly more than now, and in those respects more capable of diffusion over the dry Land. For though there be many great variations in process of time in the Sea and Land, yet it seems that *ad plurimum* the Seas grow deeper, and eat lower into the Earth, and consequently more dry Land is daily acquired, and the Seas grow narrower and deeper.

Now to deliver this Supposition of an Universal Deluge from those difficulties, and that necessity of multiplication of Miracles, which that Author hath substituted, we are to consider:

1. That we are not to make our estimate of the quantity of Waters meerly by the Superficies of the Sea, but by its vast depth, which in some places is unfathomable, and by those vast subterraneous Receptacles of Water which pour themselves out in several great Ebullitions and Marine Springs: Neither is it altogether improbable that the Waters of the Sea, naturally tending downward, and being of a fluid searching consistency, might in process of time have worked themselves even almost to the Center of the Earth, and there residing in great and vast quantities, and possibly have in a manner undermined much of the appearing Continent of the Earth: so that that which the Prophet speaketh may be true literally, *Psal.* 24. 2. *He hath founded it upon the Seas, and established it upon the Floods:* So that there are greater Store-houses of Water than appear visible to the World. If we could suppose that the incumbent Superficies of the Earth should subside and press upon those Store-houses of Water within its bowels, it might afford a competent store to drown the Earth without a new Creation.

2. Again, we may easily compute that the quantity or extension of the Body of the Air, even that which is commonly called the Atmosphere, which at the lowest account extends seven Miles in height, might by

condenſation into Water afford a competent ſtore for the drowning of the World, and yet be again rarified into the ſame dimenſion and conſiſtence which before it obtained: for there is that vicinity of Nature between thoſe two Elements, that we daily ſee conſiderable proportions of the one by condenſation changed into the other.

3. When we conſider thoſe immenſe Inundations that are Annually, and with ſome conſtant equality occaſioned by great Rains, as for Inſtance, in the River *Nilus*, which by the Annual Rains in *Ethiopia* is raiſed almoſt every Year twenty Cubits, and overflows a conſiderable part of *Egypt* yearly between the Months of *June* and *October*; and the like Inundations yearly hapning by Periodical Showers in the great River of *America* called *Orenoque*, between *May* and *September*, whereby it riſeth upright above 30 Foot; ſo that many of the Iſlands and Plains at other times inhabited, are 20 Foot yearly at that time under Water. And when we ſee that even the Ocean it ſelf in its daily Tides, eſpecially thoſe that happen about the *Equinoxes*, cauſed, as the *Copernicans* ſay, by the Interſections of the Annual and Diurnal Motions of the Earth; we need not have recourſe to a new Creation of Waters to perform this Office of the Divine Providence and Juſtice; He might by a ſtronger elevation of Vapours, or by an extraordinary motion of the Seas perform his purpoſe; which though probably it might not at the ſame time drown *Aſia* and *America*, yet by the ſucceſſive peragration of theſe Waters they might drown the whole Earth, as the Inundation of *Nilus* by the Showers of *Ethiopia* make the Flood there a Month ſooner than it happens in *Egypt*.

2. As to the Second Objection; I do confeſs it to be moſt true, that the Univerſal Deluge was a Judgment upon the Old World for their intolerable degeneration from their Duty to God: But I do not think that was the only Reaſon thereof; for the Infinite Power of God might have deſtroyed thoſe Evil Men by a Peſtilence as well as by a Flood, without detriment to the harmleſs Brutes or Birds: But as God Almighty is of Infinite Wiſdom, ſo it is the high Prerogative of that Wiſdom to have variety of Excellent Ends in the ſame Action. I do really think that this Univerſal Deluge was not only an act of his Vengeance upon Evil Men, but poſſibly an act of Goodneſs and Bounty to the very Conſtitution of this Inferior World, though the particulars thereof be hid from us. And if as ſome would have it, it ſhould be coextended only to the places that were then inhabited, and ſo the Flood particular, yet moſt certain it would be, even in ſuch a particular Flood, many great Spots of Ground would be neceſſarily drowned where never any Men were, or inhabited.

3. And it ſeems it is too haſtily concluded, That in the Period of 1656, or as the *Septuagint*, whom he follows, 2256 Years between the Creation and the Flood, that only *Paleſtine*, *Syria* or *Meſopotamia* were inhabited: For conſidering the longevity of Mens Lives in that Period, a ſmall skill in Arithmetical Calculation will render the Number of coexiſting Inhabitants of the Earth more than ſix times as many as would have hapned in 5000 Years, when Mens Ages were abridged to that ordinary dimenſion which now they have: and the ſtrait bounds of *Syria* and *Meſopotamia* would not have held one fortieth part of the Inhabitants;

all

all *Europe*, *Asia* and *Africa* were not more than sufficient for them: So that as the World grew full of Sin, so it grew full of Men and Beasts, and stood in need of a Deluge to make room for its future Inhabitants.

And this is as much as I shall say in this place, for the Vindication of the Possibility and Reasonableness of the Universality of that Deluge recorded by *Moses*.

And if any shall doubt of the Capacity of the Ark of *Noah* for the Reception of Brutes, Birds, and the Family of *Noah*, with the necessary Provisions of Livelihood for them; let him but consult Mr. *Poole*'s *Synopsis*, and he will find that which may reasonably satisfie him touching it.

And now I shall briefly consider the Method and Means and Manner of the Peopling of *America*, and storing that vast Countrey with Men and Beasts and Birds, so far forth as we may reasonably conjecture.

And herein I must confess that I only make an Abstract or brief Collection of what hath been done to my hands by those that had better Opportunities and Abilities to do it; as namely, *Grotius*, *Laetius*, *Breerwood*, *Hornius*, *Josephus Acosta*, Mr. *John Webb*, *Martinius* and others, who have professedly written, *De origine gentium Americanarum*.

First therefore, I shall consider the Manner of Traduction of Men into *America*.

Secondly, The Manner of Traduction of Brutes into *America*.

Touching the Traduction of Mankind into *America*, I do suppose these things following:

1. That the Origination of the common Parents of the Humane Nature hapned in some part of *Asia*.

2. That though the Origination of the common Parents of Mankind were in *Asia*, yet some of their Descendents did come into *America*.

3. That such Migration into *America* by the Descendents from *Adam*, was not only possibly, but fairly probable, notwithstanding all the objected Difficulties.

4. That the Migrations of the Descendents of *Adam* and *Noah* into *America*, was successive, and interpolated.

5. That although we cannot certainly define the Time or Manner of all these Migrations, yet many of them were long since, or, as we may reasonably conjecture, some Thousands of Years since; but yet after the Universal Deluge.

The Means of Transmigration of the Children or Descendents of *Adam* and *Noah* from *Asia* into *America* must be either by Land or by Sea, or by both; and if by Sea, then it must be designed, and *ex proposito*, or casually.

I think it probable it may be all of these ways, but especially by Sea.

Touching the Transmigration by Land, it seems very difficult, because though it may be possible that there may be some junctures between the North Continent of *America* and some part of *Tartary*, *Russia*, or *Muscovy*, yet none are known, unless the Frozen Seas in those Parts might be a means to transport Men thither; which is difficult to suppose, those Parts being unpassable by reason of the great Snows that happen so far Northward: though some have thought that *Groenland* is one Continent with

with *America*, and that in its fartheſt North-eaſt extent it is joyned to the Continent of *Aſia* about *Japan* or *Cathay*; ſo that a Land-paſſage might be out of *Aſia* into *Groenland*, and thence into *America*. But this is only conjectured, and not fully diſcovered to be ſo.

But however the Caſe now ſtands with the three known Parts of the World, in relation to its contiguity with the Continent of *America*; it is not impoſſible, but in that long tract of 4000 Years at leaſt, which hath hapned ſince the Univerſal Deluge, there hath been great alterations in the ſituations of the Sea and Earth: poſſibly there might be anciently Necks of Land that maintained paſſage and communication by Land between the two Continents. Many Inſtances of this kind are remembred by *Pliny*, not only of the great *Atlantick* Iſland mentioned by the *Egyptian* Prieſt in *Plato*'s *Timæus*, of a great bigneſs, almoſt contiguous to the Weſtern parts of *Spain* and *Africa*, yet wholly ſwallowed up by that Ocean to which it hath given its Name of the *Atlantick* Ocean; which if true, might for ought we know afford a Paſſage from *Africa* to *America* by Land before that Submerſion; but alſo many more Inſtances of the like Variations: thus he reports that *Sicily* was anciently divided from *Italy*, *Cyprus* from *Syria*, *Eubæa* from *Bœotia*. *Vide Plin. l.* 2. *cap.* 88, 89, 90, 91.

Strabo alſo in his firſt Book ſeems to referr the Straits or Apertures of the *Euxin* and *Mediterranean* Seas to the like ſeparations made by the force of the Sea, and attributes thoſe great Floods and Inundations to the elevation and ſubſiding of the *Moles terreſtris*, in theſe words; *Reſtat ut cauſam adſcribamus ſolo, ſive quod mari ſubeſt, ſive quod inundatur; potius tamen ei quod mari ſubeſt: hoc enim multo eſt mobilius, & quod ob humiditatem celerius mutari poſſit. Spiritus enim, hujuſmodi omnium rerum cauſa, ibi eſt copioſior. Sed, ſicuti dixi, cauſa horum efficiens accidentium eſt, quod eadem ſola alias attolluntur, alias ſubſidunt:* and he reſembles the ordinary Elevations and Depreſſions whereby the ordinary Fluxes and Refluxes are made, to the Exſpiration and Reſpiration of Animals; but thoſe greater and extraordinary Elevations and Depreſſions of the Earth to the greater Accidents; *Nam diluvia, terræmotus, eruptiones flatuum, & tumores ſubiti terræ in mari latentis, mare quoque extollunt; ſubſidentéſque in ſe eadem terræ, faciunt ut mare dimittatur.* And it is no new or feigned Obſervation, That as the *Volcans* in the Land, as *Ætna* and *Veſuvius*, raiſe up thoſe great Protuberances which ſeem Natural Mountains; ſo the like *Volcans* or Fiery Eruptions happen ſometimes in the Land ſubjected to the Sea, whereby great quantities of Earth together with Fire are thrown up, and grow into Iſlands. *De quibus videſis Strabonem & Plinium in locis citatis.* And if we may give credit to the Conjectures of *Verſtegan*, the Countries of *England* and *France* were formerly conjoyned, and after ſeparated by the Irruption of the Sea between *Dover* and *Calais*. And therefore, although it may be that at this day there is no Land-paſſage from this Elder World unto that of *America*, yet within the tract of 4000 Years ſuch there might have been, whereby both Men and Beaſts, eſpecially from about *Tartary* or *China* might paſs; or between *Norway* or *Finland* and the Northern part of the *American* Continent.

But we need not go ſo far from home, nor reſort to the Ages of ancient times for the evincing the great Changes that have been between the Sea

Sea and Lands, ſometimes by tempeſtuous Winds, ſometimes by Earthquakes, ſometimes, and that moſt commonly, by the working of the Sea, by caſting up Silt and Sand, and by exaggerations thereby wrought; elegantly deſcribed by *Ovid*, 15. *Metamorph.*

Vidi ego quod fuerat quondam ſolidiſſima tellus
Eſſe fretum; vidi factas ex æquore terras;
Et procul à pelago conchæ jacuere marinæ,
Et vetus inventa eſt in montibus anchora ſummis.
Quodque fuit campus, vallem decurſus aquarum
Fecit, & eluvie mons eſt deductus in æquor,
Eque paludoſa ſiccis humus aret arenis.

The Inſtances of latter Diſcoveries which make evident this various ſtate of the Globe of Earth and Water, thus deſcribed by the Poet, are among others thoſe that follow.

1. Some Towns that were anciently Havens and Ports where Ships did ride, are now by exaggeration of Sand between thoſe Towns and the Sea, converted into firm Land 2, 3, 4 Miles diſtant from the Sea; ſuch was St *Omer* in *Flanders*, Old *Rumney* in *Kent*, *Rye* in *Suffolk*: *vide* Mr. *Dugdale* his Hiſtory of Draining, *pag.* 173. and the Authors there cited by him.

2. Some whole Countries, as well as the *Egyptian Delta*, recovered to be dry Land, partly by the exaggeration of Sand by the Sea or the outfalls of great Rivers; thus the whole Country of *Holland* ſeems to be an Accretion partly by the Sea, partly by the River *Rhine*. *Dugdale ibid. p.* 12.

3. Some great Continents and Tracts of Ground were anciently firm Land, and full of great Woods that could not have leſs time than 500 Years continuance, and yet were afterwards reduced again into the Dominion of the Ocean, and after all that re-reduced into firm Land; leaving the infallible Signatures of theſe ſeveral Changes, though the preciſe times thereof exceed the Memory of any Men alive: Inſtances whereof are as follow.

In the great Level near *Thorny*, ſeveral Trees of Oak and Firr, ſome ſevered from their Roots, others joyned to their Roots which ſtand in firm Earth below the Moor, and in all probability have lain there hundreds of Years, till covered by the inundation of the freſh and ſalt Waters, and the Silt and Mooriſh Earth exaggerated upon them: and the like monuments of great Trees buried in great quantities in the Iſle of *Axholm* about 3 Foot, and ſome 5 Foot under ground, whereof there are multitudes; ſome Oaks of 5 Yards in compaſs, Firr-Trees of 30 Foot long. *Vide Dugd. ubi ſupra, pag.* 141, 171.

Mr. *Ray* in his Ingenious Obſervations upon his Travels in the *Netherlands, &c. pag.* 6. gives us the like account of great quantities of ſubterraneous Woods, lying 10 and 20 Ells below the Superficies of the Ground, proſtrate towards the Eaſt, which are ſuppoſed to be anciently thrown down by the irruption of the Sea and ſtrong Weſtern Winds, which yet now, and for all the time of the Memory of Man or Hiſtory extant, are firm Land, namely, *Bruges* in *Flanders*.

But that one Instance is *instar omnium*, remembred by Mr. *Dugdale, ubi supra, pag.* 172, but of known and notorious truth; the Sceleton of a great Sea-fish above 20 Foot long found in the Downs or Uplands of *Cammington* in *Huntingdonshire*, very far distant from the Sea; which is an unquestionable Evidence that the Sea was sometime Master of that Tract of Ground.

4. Touching the *Conchæ marinæ* of several sorts, it is most unquestionable; I referr my self herein to the Relation of Mr. *Ray, ubi supra, pag.* 114. *& seqq.* wherein he gives us an account of these Petrified Shells found in great quantities within Continents at a vast distance from the Sea; and some Shells that are found in the Continent, which are strangers in the Ports of the Sea conterminous to those Continents.

There are two Opinions concerning the Origination of these Petrified Shells; 1. Of those that have thought (and with great probability) that these were left in those places by the Sea, either by the Universal Deluge, or that really the Sea did possess those places where it left these Relicks and Memorials of it self upon its recess to a more setled Channel. And certainly if this be so, we must needs suppose anciently another Face of the Sea and Earth than what now is; possibly many of these Vallies and lower grounds might be entirely Sea, and the Hills and Mountains, and other Prominences of the Earth where these Petrified Shells are often found, being the Shoars of that great Ocean in those elder times, those Shells were there cast up, as they are at this day upon the Shoars.

The second Opinion is of those that think that these *Conchæ* or Petrified Shells were no other than the *Lusus naturæ*, the Effects of the Plastick power of the Earth; 1. Because they are found at such great distances from the Sea: 2. Because they are many times of such a kind of Fabrick as are not to be found in those parts of the Sea that is conterminous to those Continents where they are found; some are found in the middle of *Germany*, 200 Miles distant from the Sea at the neareſt; Scallop-shells are found in the Ditches of *Antwerp*, and yet they are rarely to be gotten on the Sea or Sea-shoar nearer than *Gallicia* in *Spain*: 3. Because these Shells are ordinarily filled with Stone suitable to the Stone of those places where they are found. These and the like Reasons, though not evidently concludent against the former Supposition, yet have induced many Learned Men to attribute these *Phænomena* to the Plastick power of the Earth.

For my own part, I have seen such apparent Evidences in and near the place where I live of things of this nature, that I am satisfied that many of them are but the Relicks of Fish-shells left by the Sea, and there in length of time actually Petrified; and the Instance of the great Fish-sceleton found at *Cammington* seems an undeniable Evidence thereof. And I remember in my youth, in the Lisne of a Rock at *Kingscote* in *Glocestershire*, I found at least a Bushel of Petrified Cockles actually distinct one from another, each near as big as my Fist: and at *Adderly*, mentioned by Mr. *Cambden*, about 40 or 50 Years since those Configurations of great Shells in Stones were frequently found, and for their curiosity, as many as could be found were taken up by several persons and carried away; since which time, for above 20 Years last past, there are none, or very few

few found; which nevertheleſs if they had been the Product of the Plaſtick power of the Earth, would have been Annually re-produced.

And yet I do think that all theſe Petrifications are not always neceſſarily the Monuments of the Sea poſſeſſing thoſe places as its conſtant or uſual Seat, but that many of thoſe Shells ariſe *de novo*, not barely from the Plaſtick power of the Earth (as ſome Inſects and Vegetables ariſe ſpontaneouſly) but from certain Seminal Ferments brought thither, which are as it were the *Seminium* of their production. And theſe Seminal Ferments were firſt in the Sea and Sea-Waters, and might by many means by brought into thoſe new parts of firm Land, 1. By the Univerſal Deluge; 2. By the various mutable ſtations of the Land, and fluxes of the Sea; 3. By elevation of thoſe Seminal Ferments from the Sea or ſome deſiccated places thereof, by the heat of the Sun, and diſcharging them by Rain upon ſeveral parts of the dry Land, and where poſſibly thoſe Seminal Ferments might be digeſted and ripened gradually into theſe Configurations. But touching theſe kinds of Seminal Ferments, and their Energy, more will be ſaid hereafter.

By this digreſſion I mean but thus much, namely, That we can by no means reaſonably ſuppoſe the Face, Figure, Poſition and Diſpoſition of the Sea and dry Land to be the ſame anciently as now, but there might then be Sea where there is now dry Land, and dry Land where there is now Sea; and that there might have been in former times Necks of Land, whereby communication between the parts of the Earth, and mutual paſſage and re-paſſage for Men and Animals might have been, which in long proceſs of time within a Period of 4000 Years may have been ſince altered: That thoſe parts of *Aſia* and *America* which are now dis-joyned by the interluency of the Sea, might have been formerly in ſome Age of the World contiguous to each other; and thoſe Spots of Ground, namely, the *Philippine* Iſlands, and others that are now crumbled into ſmall Iſlands, might anciently have been one entire Continent. And if in places that have been long inhabited, and obſerved by Men, theſe mutations have happened as are apparent to our very Senſes, yet the preciſe Times, Manner and Circumſtances thereof are wholly loſt to us, as in divers parts of *Europe* is apparent: much more the like Changes may happen in thoſe remote and vaſt Marine Tracts which have been long unknown and unobſerved, and ſcarce poſſible to be obſerved by Mankind, as in the *Scythian*, *Atlantick*, *Pacifick*, and other Northern and Southern parts of the Seas.

Touching the Second Means, namely, the Paſſage by Sea; It ſeems very probable that the greateſt and readieſt means of the migration of Colonies or Plantations into the Weſtern World from the Eaſtern, was by Sea, and the help of Navigation; whereof much might be caſual, by Tempeſts or contrary Winds, but ſome and the more principal might be, *ex inſtituto & induſtria.*

Navigation, and the uſe of Ships is of that great Antiquity, that it is difficult to aſſign when it began to be in uſe.

It ſeems probable that it was not unknown to the Old World before the Flood, and yet not in that perfection that it was after, their Veſſels being not reduced to that perfection as to endure a wide Sea, ſuch as the Univerſal Deluge was, neither were they probably fitted with ſuch Stores

as might be requiſite for ſo long and unexpected a Navigation as the Flood laſted.

But the Ark of *Noah* was certainly a moſt exact piece of Architecture, and might give a Pattern or Inſtruction for Veſſels of great burthen, and very probably ſince that time the skill of Making and Navigating of Ships was much ripened and improved.

If we conſult the Heatheniſh Hiſtories, we ſhall find Navigation very ancient among the *Grecians*, but eſpecially among the *Phenicians, Tyrians*, and *Carthaginians*.

Polydore Virgil, *de Inventione Rerum*, *l.* 3. *cap.* 15. and before him, *Pliny* in his Natural Hiſtory, *lib.* 5. *cap.* 57. gives us an Account of the ſeveral Inventors of the various forms and appendants of Shipping and Navigation, but yet the thing it ſelf they carry up to higher Memorials; the Navigation of the *Argonauts* to *Colchis* for the Golden Fleece, being one of the famous *Epochæ* of the *Grecian* Computation, happened in about the 1100 Year after the Flood according to the *Jewiſh* Account; and above 200 Years before them *Danaus* ſailed out of *Egypt* into *Greece*, Shipping being there in uſe long before.

That although we find not expreſs mention of the *Pyxis Nautica* or Magnet for many Years after mention of the Uſe of Navigation, yet the ſame Author tells us that the *Phenicians* ſteered their Courſe by the Obſervation of the Stars.

But we have a better and ancienter Account of the uſe and frequency and antiquity of Navigation in the Sacred Scriptures: *Jacob* died about 600 Years after the Flood, mentions Ships and Havens for Shipping as things well known, and particularly *Zidon*, as a great Port of Shipping, where *Zebulon*'s Lot was to be caſt, *Gen.* 49. 13. *Balaam* alſo in the time of *Moſes* mentions the Ships of *Chettim* or *Greece* as a known thing, *Numb.* 24. 24. again, in the Reign of *Solomon*, the *Tyrians* are taken notice of to be expert Sea-men; that *Solomon* had a Navy upon the Coaſt of the *Red Sea*, that from thence he with the *Tyrians* made long and great Voyages to *Ophir* and *Tarſhiſh* (places, as it ſeems moſt probably, in the Eaſt *India*, not in *Africa* or *America*, as ſome have thought) and thence brought Gold and other Commodities once in three Years. 2 *Chron.* 8. 18. 9. 21.

And how ſedulous and induſtrious all Maritim Coaſts were in advancing of Navigation, in multiplying of Shipping, in Merchandizing and Trading, in ſearching out and ſubduing Forein Countries, when either they were afflicted at home by War, or grew over-populous, the Hiſtories of all ſucceeding Ages of the *Grecians* and *Perſians*, of the *Tyrians*, *Phenicians* and *Carthaginians*, of the *Romans* and *Egyptians*, of the *Seres* or *Chineſes*; and in later times, of the *Venetians, Sicilians, Rhodians, Spaniſh*, *Dutch*, *French* and *Engliſh* give us a large Account.

And therefore as later Years, have given us of this Age witneſs, of the Tranſplantations to *America* from *Spain*, *France*, *Portugal*, *England, Scotland*, *Holland*, and ſome Ages before that have given Inſtances of Tranſplantations from *Norway* into *Groenland* and *Iceland*; ſo it ſeems not only poſſible, but very probable, that either by Caſualty and Tempeſt, or by Intention and Deſign, either out of lucre of Gold, or for disburthening of the Countries ſurcharged with multitude of Inhabitants, or by greatneſs of Mind, affecting Noble Undertakings, or by reaſon of Hard-

Hardſhip, Oppreſſion and Wars at home, or by ſome or all of theſe ways, ſeveral parts of this great Continent at ſeveral times have been planted with Inhabitants, which in proceſs of time have multiplied into thoſe many Nations, and have forgotten their Original, and the Manners, Religion or Cuſtoms of thoſe People from whom they were derived in *Europe*, *Aſia*, or *Africa*. And ſurely we have reaſon to believe that we of this Iſland are not *Aborigines*, but came hither by Migrations, Colonies, or Plantations from other parts of the World; yet were it not for the help of Hiſtorical Monuments, we ſhould have forgotten who inhabited this Iſland ſix or ſeven hundred Years ago: yea, and notwithſtanding all theſe Hiſtorical helps, we have no Authentick Tradition that can give us any tolerable Account before the time of *Julius Cæſar*, much leſs of the firſt Plantation of this Iſland: for as to the Story of *Brute* and his Company, we have but little evidence of the truth of it, and if it were never ſo true, yet it doth not prove it uninhabited before.

Now thoſe Countries in *Aſia* or *Europe* that with greateſt probability firſt peopled *America*, ſeem to be 1. The *Britiſh*; 2. The *Norwegians*; 3. The *Tartars* or *Scythians*; 4. The *Phenicians* and *Carthaginians*; 5. The *Chineſes* or *Seri*. I do not at all mention the late Migrations of the *Spaniſh*, *French*, *Portugals*, *Dutch*, *Engliſh*, or *Scottiſh*, but thoſe of a more ancient Edition.

1. Touching the *Britiſh* Migration, recorded by Dr *Powel*, *ſub anno* 1170, who tells us, That *Madoc* one of the Sons of *Owen Gwenith* went over twice into the Northern Coaſts of *America*, and made there a *Britiſh* Plantation, who though in proceſs of time much degenerated from their Nature, Language, Cuſtoms and Religion, yet retained ſome Monuments of all. This is at large proſecuted by *Laetius* in his ſecond Obſervation, who gives us many Reſemblances in ſome principal Words between the Language of them and the *Cambro-Britains*.

2. Touching the Migration of the *Norwegians*, *Hugo Grotius* hath made ſome conſiderable Obſervations, which though not altogether approved by *Laetius*, yet he willingly grants that *Iceland*, and ſome part of *Groenland* were viſited and planted by *Ericus Ruffus*, *ſub anno Chriſti* 982, and the Chriſtian Religion there planted, and probably from thence Colonies were traduced into the Northern parts of *America*.

3. Touching the Migration of a conſiderable number of *Tartars* and *Scythians* into the North-eaſt part of the Continent of *America*, over the *Fretum Anian*, *Laetius* ſeems to lay much ſtreſs upon it, partly in reſpect of the eaſineſs and ſhortneſs of that Paſſage from *Nova Zembla* and the fartheſt North-eaſt part of *Tartary* over that narrow Sea; and partly by reaſon of the congruity of the Barbarous Cuſtoms of the *Americans* and *Scythians*, and ſome other Indications of that kind.

4. Touching the Migration of the *Phenicians* and *Carthaginians*, eſpecially into the South-eaſt part of the Continent of *America*, as *Mexico* and *Braſil*, *Hornius* thinks it probable upon many accounts: 1. Upon the great skill and long practice of Navigation, and the multitude of Shipping of the *Phenicians* and *Carthaginians*. 2. Upon the Accommodation of the part of *Carthage* and other *African* Ports bordering upon the *Mediterranean* Sea, to make their Voyages Weſtward, and the great advantage of the conſtant Eaſterly Wind, that makes the Voyage to *Mexico*

and *Brasil* more easie. 3. Upon some ancient Histories intimating the progress of the *Phenician* and *Carthaginian* Fleets into some Islands and Continents in or near the *Atlantick* Ocean. 4. From the Analogy of many Words, and Names of Places with the *Carthaginian* Language; all which, and much more to this purpose may be seen in the Book of *George Horne, de Originibus Americanis.* 5. And lastly, much of the Origination of the *Americans* seems to be attributable to the Migrations of the *Seri* or *Sinenses* from the Eastern parts of *China* and the *Philippine* Islands, from the Islands of *Borneo*, and the *Molucca's*, and *Japan*, through the *Mare Pacificum* into the Western part of the Continent of *America*; which though it be a large Ocean of above 2000 Leagues, between the *Philippine* Islands and the West of the *American* Continent, and the passage thither difficult in respect of constant Easterly Winds between the Tropicks; yet many Reasons seem to induce a likelihood of Plantations from thence, 1. In respect of the Antiquity of the Peopling of *China*, which if we believe Mr *Webb* was the first peopled after the Universal Deluge; that the Ark there first rested upon that tract of Mountains that environ a great part of *China*; that *Sem* the Son of *Noah* first setled there; that it is the most Ancient and Primitive Language; that by means of the Antiquity and Setledness of this Monarchy, having continued in its entireness ever since the Universal Deluge, it is most probable that the Western Continent was peopled from thence. 2. Because they were the greatest Masters of Shipping, and best skilled in Navigation of any part of the World; that the *Pixis Nautica* was there known and used long before the knowledge thereof in *Europe*. 3. The many Islands on the South-east and South part of *China*, as *Borneo*, *Java*, *Gilolo*, *Celebes* and others near the Equator are dis-joyned but by very narrow Seas, not much broader than those between *England* and *France*, from the Neck of Land called *Terra des Papos* or *Nova Guinea*; and *Nova Hollandia*, which is now discovered to be at least in some parts disjoyned from the more Southern Continent by a great Sea, but thought to have been anciently part of the Southern Continent, and possibly so it may continue in some parts thereof.

Upon these and the like probabilities it may seem reasonable to conclude, 1. That the *Americans* had their Original from the Inhabitants of *Europe*, *Asia* and *Africa*, that transmigrated into that Continent either intentionally, or casually, or both. 2. That those Migrations were not of any one single Nation or People, but from many or divers Nations. 3. That these Migrations were not altogether, or at one time, but successively in several Ages; some earlier, some later. 4. That therefore it is impossible to determin the Time or first *Epocha* of such Migrations, but only that they were all since the Universal Deluge, which is now above 4000 Years since: Some Migrations might be within two, three, or four hundred Years after the Flood, some later, according to various Accidents; but it is no way probable that the earliest Migration thither was less distant than 1000 Years from this time. 5. That if we should admit that the first Migration thither were above 2000 Years since, of an hundred Pairs they might easily propagate a number competent enough to people all that vast Continent. 6. That it seems that since the last of these ancient Migrations, suppose that of *Madoc* and his

Britons,

Britons, until our late Migrations by the *Spaniards*, *French*, *Engliſh*, *Dutch* and *Scotch*, there probably interceded an interval of at leaſt four or five hundred Years, in all which interval the Commerce and Communication between *Europe* or *Aſia*, and *America*, hath as it were ſlept, and been forgotten both by them and us. 7. That in that interval of 500 Years or thereabouts in all Parts, but in ſome Parts far greater, there muſt in all probability happen a great forgetfulneſs of their Original, a great degeneration from the Primitive Civility, Religion and Cuſtoms of thoſe places from whence they were firſt derived; a ferine and neceſſitous kind of Life, a converſation with thoſe that having been long there were faln into a more barbarous habit of Life and Manners, would eaſily aſſimilate at leaſt the next Generation to Barbariſm and Ferineneſs. It is true, where a Colony comes and keeps it ſelf in a Body, as the *Roman* Colonies anciently, and our Plantations in *Virginia* and *New England* do, and the new Acceſſions incorporate and joyn themſelves unto that Body, Cuſtoms both Religious and Civil, and the Original Language are long kept entire: But where the Acceſſions are but thin and ſparing, and ſcattered among the Natives of the Country where they come, and are driven to conform themſelves unto their Cuſtoms for their very ſubſiſtence, ſafety and entertainment, it falls out that the very firſt Planters do ſoon degenerate in their Habits, Cuſtoms and Religion; as a little Wine poured into a great veſſel of Water loſeth it ſelf: But if they eſcape a total Aſſimulation to the Country where they thus are mingled, yet the next Generation in ſuch a mixture is quickly aſſimulated to the corrupt Manners and Cuſtoms of the People among whom they are thus planted: So that it is no wonder, if in ſuch kind of ſmall Acceſſions ſucceſſively from one and the ſame or ſeveral Countries, the third Generation forget their Anceſtors, and the Cuſtoms, Religion and Languages of thoſe People from whom they were firſt derived, and aſſume various temperaments in their Language and Cuſtoms, according as the places of their Habitation and the Company among whom they live, obtain. And if any man conſider but the ſtrange contemperation and production of our *Engliſh* Language out of the combinations and mixtures of the *Daniſh*, *Saxon*, *Britiſh*, *French*, *Dutch*, and other Countries, he may eaſily perſwade himſelf, that out of the Mixtures of People there may ariſe as great diverſities of Language, Rites and Cuſtoms, as there may Temperaments of Qualities by the various combinations and mixtures of the prime Qualities, or varieties of Words by the various appoſitions of the 24 Letters in the Alphabet: and even theſe Cuſtoms and Languages ſubject to infinite ſucceſſive alterations and variations, according to the variety of Forein Mixtures, Commerce, Victories, Wars, Credit and Opinion of Factions or Parties.

And thus far touching the Peopling of *America* with Mankind; I ſhall ſubjoyn ſomething touching the ſtoring of it with Brutes and Birds.

It ſeems in the original Creation of things that Vegetables and Inſects, eſpecially thoſe that by their nature may *ſponte oriri*, or by equivocal Generation, had as large and univerſal production as the habitable parts of the Earth or dry Land; as Fiſhes, for the moſt part, had their

firſt

first created production as universal and *sparsim*, in the whole extent of the Seas or Waters.

But whether the primitive production of the more perfect Animals both Brutes and Birds, that have ever since had their production by univocal Generation, were diffusively created over the habitable or dry Ground as Vegetables were; or whether there were only certain *Capita specierum perfectarum utriusque sexus*, created in a certain determinate *districtu* near to the place of the first Origination of Mankind, *viz.* in or near the Garden of *Eden*; and that the whole Progeny of such Brutes and Birds were propagated after successively through the whole World from these *Capita specierum*, seems an Inquiry of more difficulty to determin.

Some Observations seem to favour the former Conjecture, especially considering that many *Species* of Brutes and Birds are as it were appropriate to their several Countries, as Elephants, Camels, Lions, and divers other Brutes; Parrots, Ostriches, and other Fowls which are not found in other Countries.

But especially the same Opinion is inferred from the Beasts and Birds which are found in *America*, which have not the like in the other parts of the World; *Acosta* in his 36th Chap. of his 4th Book saith, that besides the Beasts called *Guanaco's* and *Paco's*, there be a thousand different kinds of Birds and Beasts of Forest in *America* which have never been known neither in shape nor name in other parts of the World; whereof no mention is made, nor names given in *Greek* or *Latin*, or other Eastern Language of the World.

And in his 34th Chapter of that Book he tells us, That though the *Spaniards* in their first Plantation found certain Beasts, Birds, and other things in *America* common to those of *Europe*, *Asia* and *Africa*; yet some Beasts and other things they brought thither which were unknown there, and for which they had no Names but what the *Spaniards* brought along with them. So that one of the best Indications which they had to know those Beasts which were originally brought with the *Spaniards* out of *Europe* in their first Plantation, was, in that the *Indians* had no other Names for such but *Spanish* Names.

And again, since *America*, as is generally supposed, is divided on every side from *Asia*, *Africa* and *Europe* by considerable Seas, and no known passage by Land, so that all the possibility there could be for traduction of the Brutes into *America* from the known World, could only be by Shipping: Though this might be, and certainly was a method used for the traduction of useful Cattel from hence thither, yet it is not credible that Bears, Lions, Tigers, Wolves, and Foxes should have so much care used for their transportation.

And upon the same account they seem to inferr, That the Beasts and Birds preserved by *Noah* in the Ark could only be such as were appropriated to *Asia*, but not those that were of the *American* kinds, for how should they come from thence to the Ark? Or if it be supposable that they could be brought thither, why did none of the kinds which are found commonly in *America* leave some of their Kind or Race here?

On the other side, it hath been the more received Opinion, That the *Capita specierum perfectarum* of perfect Terrestrial Animals and Birds were

were created near unto the place of *Adam*'s Creation, and that from these, and these only the Race of perfect Animals, Birds, and Brutes were propagated and traduced over the face of the whole Earth; and that the *American* Brood was traduced from these, and from those Couples of these that were preserved by *Noah* in the Ark: And that upon these Instances, whereof some are of Divine authority, others are Physical.

1. All the Beasts and Fowls were brought to *Adam* to give them their Names, *Gen.* 2. 19,20. which could not have been, if the several kinds of them in their first Creation had not been within some reasonable and approachable distance.

2. All the Beasts and Birds had their kinds preserved in the Ark, and the rest were drowned by the Universal Deluge. *Gen.* 7. 23.

3. Although the Continent of *America* was in the first *Spanish* Plantations thereof stored with wild Beasts, as Lions, Tigers, Bears, *&c.* yet those Islands that were remote from the Land, though large and fruitful, had not any of these Beasts then in them, as *Cuba*, *Hispaniola*, *Jamaica*, *Margarita*: this is verified by *Acosta*, upon a strict examination, *Lib.* 1. *Cap.* 21. *& alibi*, and the same hath been found true in other new discovered Islands by other Navigations: Whereby it appears that the Brutes were not *Aborigines*, for then they should have been found in those Islands as well as in the Continent, as well as Insects and Vegetables; and that therefore in the Continent it self, the first storing thereof was not from it self, but by some means of accession from other Parts, for otherwise they might have been found as well there as in the Continent.

The two great Obstacles are, 1. The difference of the Brutes and Birds of that Continent from those of *Asia*, *Europe* and *Africa*: 2. The difficulty of finding a commodious passage from *Asia*, *Africa*, or *Europe* for such Beasts and Birds from hence thither, admit they were all of the same kind. And touching both these I shall say something.

1. Touching the diversity of Brutes and Birds of this and the Western World; the difficulty from thence is but small, for there are divers Accidents even in the Eastern World, *Europe*, *Asia*, and *Africa*, that afford us Instances of that kind, though, excepting some Islands, it be one common Continent: I shall instance only in some Accidents of this kind: 1. This Variation may happen by Mixtures of several *Species* in Generation, which gives an anomalous Production, as we see ordinarily by the mixture of Pheasants and Hens, Chickens are produced partaking of both in colour and figure, which yet renders them different from both: And it is observed by many that the Cause of that great variety of Brutes in *Africa* is by reason of the meeting together of Brutes of several *Species* at Waters (which in those dry Countries are scarce) and the promiscuous couplings of Males and Females of several *Species*, whereby there arise a sort of Brutes that were not in the first Creation. This was long since observed by *Aristotle*, so that it grew a Proverb also, *Semper aliquid novi Africa affert. De generat. Animal. lib.* 2. *cap.* 5. and so continues to this day. 2. The Percolation, as I may call it, of Vegetables by Prosemination will alter their Nature, Colour and Shape, as Tulips, or Carnations rising from Seed will differ in Colour from what those were that yielded those Seeds. 3. Culture will improve Wild Flowers in bigness and beauty; and want of Culture will sometimes

make

make Vegetables degenerate. See for these Transmutations Sir *Francis Bacon*, in the 6th Century of his Natural History. I have often observed, that River-Fish, as Trouts and Flounders, and others, will alter their figure, some for the better and some for the worse, being put into Ponds. Again in Animals; the Learned Doctor *Harvey* in the end of his last Book *de Generatione Animalium*, delivers an Opinion which at the first view seems wonderful strange, *viz.* That the Conformation of the *Proles*, both in Men and Brutes, to their several specifical Shapes and Configurations, is by a certain specifical operative *Idea* in the Phantasie or Imagination of Animals, fixed and radicated in them, and conformable to their several *Species*; and that monstrous or anomalous Productions are by some disturbance or discomposure of that specifical *Idea*, by some other inordinate *Idea*. And conformable hereunto seems the Opinion of *Marcus Marci*, in his learned Book *de Ideis formatricibus*. Whatever the truth of this Opinion be, it is not here properly examinable; yet it seems beyond question, that as to some external Signatures, as Colour, Shape, Figure, *&c.* the Phantasie or Imagination of the Females as well Animals as of Mankind, especially *in momento conceptus* and for some time after, hath a great Influence: Some there are that think that *Jacob*'s change of the colour of Sheep and Goats by peeled Rods, *Gen.* 30.37. was partly at least upon a Physical account; and he that reads *Fienus de Viribus Imaginationis*, and Sir *Francis Bacon* in the latter end of his Natural History, will find such Changes by the strength of Imagination as are very remarkable. It is probable, that in the great plenty of Birds and Fowls in uninhabited Woods of the Western World, even the several aspects of their Figure and Colour in their seasons of Copulation may make various Configurations and Colours in their Broods. 5. But that which is more to my purpose, and of greater evidence, is this; Variety of Soils and Climates makes admirable and almost specifical Variations even of the same *Species* of Vegetables, Animals and Men: In Vegetables, a fruitful Soil or Climate improves in Beauty, Bigness and Virtue; a barren Soil or Climate impairs them: among Animals, the *Indian* Elephants are larger than the *African*; the *English* Mastiff degenerates in his courage and fierceness, at least in the first succession by generation, when brought into *France*; the *Barbary* Horse is of a finer Spirit and Make than the *Flanders* Horse, yet degenerates in a great measure in the first or second generation, when removed from *Barbary*. Nay let us look upon Men in several Climates, though in the same Continent, we shall see a strange variety among them in Colour, Figure, Stature, Complexion, Humor; and all arising from the difference of the Climate, though the Continent be but one, as to point of Access and mutual Intercourse and possibility of Intermigrations: The *Ethiopian* black, flat-nosed and crisp-haired; the *Moors* tawny; the *Spaniards* swarthy, little, haughty, deliberate; the *French* spritely, sudden; the Northern people large, fair-complexioned, strong, sinewy, couragious: nay we may see in more conterminous Climates, even in those of ours, great variety in the People thereof; the Up-lands in *England* yield strong, sinewy, hardy Men; the Marsh-lands, especially about *Somersetshire*, Men of large and high stature; the *Welsh* that inhabit the Mountains, commonly sharp-visaged. And there is no less difference in the Humors and Dispositions of People inhabiting several

Climates

Climates, than there is in their Statures and Complexions. And it is an evidence that this ariſeth from the Climate, becauſe long continuance in theſe various Climates aſſimilate thoſe that are of a Forein extraction to the Complexions and Conſtitutions of the Natives after the ſucceſſion of a few Generations.

And upon this account there may be great variety in the Colour, Figure and Make of divers Birds and Animals in *America* from thoſe in the Eaſtern World, and yet both have the ſame original extraction; for there is no leſs variety in the Brutes and Birds of *Africa* from thoſe of *Europe* or *Aſia*, and yet nothing impedes their mutual commigrations, being the ſame Continent, though differing Climates.

And therefore although *Acoſta* and others tell us of Brutes and Birds in *America* that are not found in *Europe* or *Aſia*, it doth not at all enervate the Sacred Hiſtory; it is poſſible there may be the like in *Africa*, or ſome Parts of *Aſia* which yet *Acoſta* never travelled. 2. But if not, they might ariſe by an anomalous Mixture of *Species*. 3. Poſſibly they may be of the ſame *Species* with the Primitives, but received ſome accidental Variations in proceſs of time; as the various kinds of Dogs here in *England*, Maſtiffs, Spaniels, Hounds, Greyhounds, *&c.* might in their Primitives be of one *Species*; the like may be ſaid of various kinds of Apes, Baboons, Monkies; of Elks, Buffalo's, and Cows; the like of ſeveral ſorts of Parrots, which primitively might be but one *Species*, and receive accidental Variations in proceſs of generations, by ſome of the means above mentioned: and thus Crows, Daws, Rooks might be but a baſtard kind of Raven; the *Royſton* Crow and the *Corniſh* Daw, though they have accidental differences from thoſe among us, ſeem yet to be of the ſame kind with ours; and ſo poſſibly might the Sheep of *Peru*, called by *Acoſta Pacos* and *Guanacos*, be primitively Sheep, but differenced by their long abode in ſucceſſive generations in *Peru*; the *Auza's* and *Poulaſſes* mentioned by *Acoſta*, *lib.* 4. *cap.* 37. may be but a *Species* of Ravens, though by the Climate accidentally altered in bigneſs and ſhape.

Theſe things I mention, that it may appear, That even in the ſame Continent, wherein a mutual tranſition may be without difficulty, yet the very Climate may as it were appropriate ſome Brutes to certain Countries, which yet might without any great difficulty be at firſt Creation of them contained within nearer bounds, and might upon the occaſion of the Common Deluge be drawn together into the Ark, and afterwards by their wandring farther, and inuring themſelves to a certain Continent or part thereof, be accidentally changed, and as it were appropriate to it: And alſo to ſhew, That Animals even of the ſame Original, Extraction and *Species*, be diverſified by accuſtomable reſidence in one Climate, from what they are in another. Therefore poſſibly as little Conſequence may be drawn againſt the common Original of the *Capita ſpecierum Animalium* in *Aſia* and *America*, as may be drawn from the diverſity of ſome kind of Animals inhabiting in divers parts of *Europe*, *Aſia* or *Africa*, which notwithſtanding is one common Continent. I do therefore conclude, That the variety of the Brutes and Birds in *America* from thoſe in *Aſia*, where the Ark was made, is no Argument againſt their Original from thoſe that were preſerved in the Ark: Becauſe that it doth not yet appear,

that those that are now known in this World do differ any more than accidentally from those in the Western World, *viz.* either by the Couplings and Mixtures of Animals of several *Species*, or by reason of the Variety of the Climate, or Temperament thereof; which Variations might be acquired by a dispersion of them as well into *America*, as other parts of *Europe*, *Africa* or *Asia*, after the Universal Deluge.

As to the Second, namely, The difficulty of the first Migration of Brutes and Birds from *Asia* where the *Capita specierum* were first created, and after in the Ark preserved; I shall first deliver my self from the lesser difficulties of the Objection, and afterwards consider the greater.

1. It seems but little difficulty touching the translation of Birds from hence thither: for although without the supposition of *Plato*'s *Atlantis*, or some number of smaller Islands in a convenient distance in the *Atlantick* Ocean, it is hardly possible to suppose that any Fowls could maintain a flight from *Spain* or *Africa*, cross the *Atlantick* Ocean into *America*; yet there are other Seas between some parts of *Europe* and *Asia*, and the Northern parts of *America*, where Fowls by flight might pass from hence thither, as the *Fretum Anian*, and the Sea bordering upon *Norway* and *Finland*.

2. As to the Water-Fowls, the difficulty is less, for they can and do supply the weariness of a long flight by taking Water, and infinite numbers of them are found in Islands far remote from any Continent, and even in the main Ocean.

3. As to Domestick-Fowl, as Hens, Geese, Turkies, *&c.* and tame Animals for use, delight, or food, as Horses, Dogs, Hogs, Sheep, Goats, Deer, Apes, Monkies, Peacocks, Parrots, *&c.* of which *America* is furnished; there is as little difficulty but they might be transported by shipping either for use or commerce, especially by the *Africans*, who had store of them; and even Peacocks and Apes were an ancient part of commerce, 2 *Chron.* 9. 21. and *Acosta*, *lib.* 4. *cap.* 33. tells us that the Dogs and Cattel transported not much above 20 Years before his coming thither from *Spain*, were in that space so exceedingly multiplied in St *Domingo* and other Islands possessed by the *Spaniards* where there were none formerly, that they became wild, and filled all the Country, that they were forced to use what means they could for the destruction of the Dogs, and killed infinite numbers of Cows, meerly for their Skins.

4. The only difficulty that seems to remain, is touching those ferine, noxious, and untamable Beasts, as Lions, Tigers, Wolves, Bears, and Foxes with which that Continent abounds: for it is not probable that these should be transported by shipping; no Men would probably be at that charge and hazard with such Beasts that would do more harm than good: And although possibly the frozen Northern Seas might be a Bridge for their passage, yet that seems unlikely in respect of the great Snows that accompany such Frosts, and the impossibility of a supply of food in so great and troublesom a Journey: And as to Swimming, though it hath been observed that Bears have swimmed into Islands many Leagues from the Continent to prey upon Fowls, and to return again; and though the Seas between *Tartary* and *Cathay* and some parts of *America* be not so wide as the *Atlantick* or *Pacifick* Ocean, yet they are too large to afford a passage by Sea, especially for Tigers and Lions, which are not so apt to take

take the Water. And it is not yet certainly discovered, though conjectured, that there is any Neck of Ground, or passage by Land from any part of *Europe* or *Asia* into any part of the Continent of *America*.

There remains therefore nothing that I can reasonably conjecture to accommodate the difficulty, but to suppose what I have formerly intimated; That although it should be granted that there is now no such Land-passage extant, yet within the compass of 4000 Years elapsed since the Flood there have been some such Junctures or Land-passages between the Northern parts of *Asia* or *Europe*, and some Northern parts of the Continent of *America*, or between the South-east parts of *China* or the *Philippine* Islands, and the Southern Continent (though lately there be discovered an interposition of Sea between the Island *del Fuogo* and that Southern Continent) whereby either from *Asia* to *Groenland* in the North, or from *China* to *Terra australis incognita* on the South a Land-passage might be from *Asia* to *America* for Men and Brutes, though for some Ages past either by the violence of the Water, or by Floods or Earthquakes, which hath made great alterations in the Globe of the Earth and Seas, that Bridge or Line of Communication be now broken and obliterated. And truly he that observes the infinite company of Islands lying between the Continent of *China* and *Nova Guinea*, almost contiguous to each other, hath probable reason to believe that these were all formerly one Continent joyning *China* and *Nova Guinea* together, though now by the irruption of the Sea crumbled into many small Islands.

CAP. VIII.

The Seventh Evidence of Fact proving the Origination of Man, namely, The Gradual Increase of Mankind.

I Come to the Seventh Evidence of Fact, which seems with much strength and clearness to evince the Origination of Mankind, and that within such a Period of Time as the Sacred Scriptures propound, namely, The Gradual Increase of Mankind upon the Earth.

And because I mean throughly to examin this Consideration, I shall propound to my Enquiry these ensuing Particulars.

1. Whether according to the ordinary course and procedure of Nature in the Generations of Mankind, there be not a gradual and considerable Increase of Mankind upon the face of the Earth, unless some collateral Emergency or Occurrence interrupt or correct that Increase.

2. What Correctives there may be supposed that may check and restrain that Increase of Mankind, that otherwise according to the ordinary course of Nature would have obtained in the World.

3. Whether those Correctives or collateral Occurrences which have been, or may be supposed to have been in the World, have so far prevailed, as totally to stop that Increase of Mankind, which upon a Natural account, without the intervention of such Correctives would have obtained.

4. Whether notwithſtanding all theſe Correctives of the Increaſe or Exceſſes of Generations, yet if ſtill the numbers of Mankind have increaſed, it be not a ſufficient Argument to ſatisfie a reaſonable Man that Mankind had an Inception, and that within ſuch a period or compaſs of Duration as is not of a vaſt or prodigious Exceſs.

I ſhall begin with the firſt of theſe, and I ſhall ſuppoſe, and I think clearly evidence, That without the intervention of ſome accidental or collateral Corrective, Mankind muſt needs increaſe upon the Earth, and that the Generations and Productions of Men and Woman in an ordinary, regular and conſtant courſe of Nature, do very much exceed the Decays of Mankind by Natural courſe of Mortality, allowing into the Account thoſe common Decays of Mankind by ordinary, uſual and common Diſeaſes incident to Individuals.

The Laws, eſpecially of the *Romans* and others, have determined the Legal Ages of Matrimonial Conjunction of a Man to be 14, of a Woman to be 12; Prudential Conſiderations have protracted it longer. *Plato* in his Third *De Legibus* allows and determins the Age of the Woman ſhould be between 16 and 20, of the Man to be between 30 and 35: we will ſuppoſe the *medium* to be for the Man 26, for the Woman 20. *Ariſtotle* determins the extreme time for Generation in the Man to be 70, for the Woman 50; the *medium* to be 65 for the former, 45 for the latter: we will take a ſhorter *medium* for both, and ſuppoſe the extreme term for Procreation for Man to be 55, for the Woman to be 40 Years; upon this account the *terminus* or *periodus procreativa* to be 20 Years: And although within that Period there is a poſſibility of procreation of 20 Children, yet conſidering that all Pairs are not of that fertility, we will take the *medium* to be leſs than a third part, *viz.* 6.

And becauſe upon a due Obſervation of the Sexes of Mankind, eſpecially by ſuch as have curiouſly obſerved the Regiſters and Calculations of Births and Burials, there is ſome, though not very conſiderable exceſs of Males above Females, *viz.* as 14 to 13, or in ſome places, as 16 to 15 (an evidence of the wiſe Providence of God, to bring the number of each Sex to ſo near a parity) yet allowing a redundance to the Males, to ſupply thoſe many Caſualties whereunto Males are ſubject by Wars, Navigations, and other Occurrences that more exhauſt the numbers of Men than Woman. Therefore we will allow to Productions of five Couples, about 16 Males and 14 Females; which though not exactly anſwering either of thoſe proportions, yet comes near to them, namely, 16 Males to 14 Females.

And becauſe partly through the weakneſs of Infancy, and thoſe Diſeaſes that happen to Youth either by reaſon of intemperance, indiſcretion, want of of care, and the ebullition and fermentation of Blood, more dye before 20 Years than between that age and 50, we will ſuppoſe, of thoſe ſix Procreations only two attain to the ſtate of future Nuptials and procreation of ſucceeding Generations; therefore we will allott only two of theſe ſix to attain to the ſtate of Men and Women, and conſequently in an ordinary courſe of Nature live to the common age of Mankind.

And although the common age of Mankind, when they are paſſed the danger of Childhood and Youth, is 70 Years, yet becauſe I would have my

my Supposition as easie and general as may be, I shall allow 60 to be that ordinary Age, abating great Casualties and Epidemical Diseases.

And upon this account we may justly suppose these things; 1. That these two Children may be coexisting with their Parents for near 30 Years; for if the eldest be born at 27 Years of the age of the Father, and the other at 30 Years of his age, and live till the Father be 60 Years old, the youngest is 30 Years old at the extremity of his Father's age, which we suppose 60 Years: and 2. These two Children by Intermarriage may have likewise two, three, or more Children by that time the Father attains 60 Years: So that in the compass of about 34 Years the number of two, namely the Father and Mother, is increased to the number of eight, namely, the Father and Mother, their two Children, and four Grand-children; so that in 34 Years they become increased in a quadruple proportion, and all coexisting: and although by that time we suppose the Father and Mother dye, yet in the like Period of thirty four by a Geometrical Proportion their Increase is multiplied proportionable to the Excess of their number above Two.

But if we shall suppose that the *Technogonia* began sooner, as at 17 or 18 Years, and continued longer, *viz.* until 65, and that the Ages of Mens Lives were protracted generally to 70 Years, the Increase would be very much greater.

And upon this account it is, that considering the long Lives of the Ancients shortly after the Flood, and the long continuance of their strength of Procreation, *Petavius* in his 9th Book *De doctrina Temporum, cap.* 14. and before him, *Temporarius* in his Chronology gives us a plain Demonstration, That within the compass of 215 Years after the Flood the Sons of *Noah* and their Descendents might without a Miracle increase to prodigious and incredible multitudes. The number of coexisting Individuals is by one of these Authors with very clear evidence computed to 1219133512, descended from one of the Sons of *Noah*. And therefore, that allowing the beginning of the *Syrian* Monarchy to have been about 153 Years after the Flood, it might shortly after the beginning of *Ninus* his Empire, which is supposed to have been about 215 Years after the Flood, have grown to that greatness, that might easily render credible the mighty Cities that were built by him, and the great Armies that he raised, and the Battles that he fought, and vast Slaughters that he made and suffered: But if we should follow the Account of the *Septuagint*, which gives us a far greater Period of Time from the Flood to *Abraham*, the advantage of the Increase would be signally greater; although the common Account of the *Jews* render the Increase easily credible, without the help of a Miracle.

And because that there can be no greater evidence of this Truth of the Increase of Mankind than Experience and Observation, neither can there be any Observation or Experience of greater certainty, than the strict and vigilant Observance of the Calculations and Registers of the Bills of Births and Deaths; and because I do not know any one thing rendred clearer to the view, than this Gradual Increase of Mankind, by the curious and strict Observations of a little Pamphlet, entitled *Observations upon the Bills of Mortality*, lately printed, I shall not decline that light or evidence that this little Book affords in this matter; wherein he plainly evinceth,

1. That

1. That the number of Males to Females is regularly as 14 to 13, or as 16 to 15. *Cap.* 8.

2. That ſuppoſing the number of breeding Couples to be 48000, in about the ſpace of 7 Years, in a healthy time, or in 8 Years, if there be Plagues, the great City of *London*, which is not ſo healthy as the Countrey, will double, without the help of the acceſs of Foreiners: and therefore *Adam* and *Eve* doubling themſelves every 64 Years, would in the Period of 5610 Years, the ſuppoſed diſtance from the Creation of Man, produce a far greater number of Mankind than are now in the World. *Cap.* 11.

3. That in the Countrey, which is generally more healthy than *London*, upon a *medium* of Obſervation of 90 Years, there are five Births for four Burials, ſometimes three to two, and ſeldom in any Year theſe Burials equalled or exceeded the Births; or if they did, yet the ſucceeding Years ballanced it to that proportion of 5 to 4; for in the ſpace of 90 Years 1059 were Born in one Pariſh more than were Buried. *Cap.* 12.

4. That this Redundance did not much increaſe the place or Pariſh it ſelf, becauſe by tranſmigrations to *London*, to Forein Plantations, and other places of Trade, they disburthened the proportion of their increaſe, and added to the greatneſs and amplitude of other places, eſpecially *London*.

5. That conſidering the ſmall exceſs of the number of Males above the number of Females, and conſidering the redundancy of the number of Males is only ſufficient to make good that decay of Males above Females, by Wars and Navigation, and other Accidents more incident to Males than Females; there is very near a parity of Males and Females in the World, to keep it in a conſonancy and congruity to the firſt inſtitution of Matrimonial ſociety between one Man and one Woman.

6. That conſequently Polygamy doth not in the general conduce to the Increaſe of Mankind, becaaſe the natural or ordinary proportion between the number of each is equal. But in as much as by reaſon of the great Conſumption of Males among the *Turks*, by divers Accidents, eſpecially that of their great Wars between them and the *Perſians*, *Tartars*, *Chriſtians* and *Moors*; whereby there is, or at leaſt in ſome Ages was, a great redundance of the number of Woman above the number of Men: The uſe of Polygamy allowed among them, gives a greater increaſe of People than otherwiſe would be; becauſe of the exceſs of the number of Women above the number of Men, by ſuch Accidents.

Theſe are ſome of thoſe plain and evident Obſervations of the ſeemingly inconſiderable Pamphlets; which give a greater Demonſtration of the Gradual Increaſe of Mankind upon the face of the Earth, than a hundred notional Arguments can either evince or confute, and therefore I think them worthy of being mentioned to this purpoſe.

Upon all which, and much more that might be ſaid, it is evident, That according to the ordinary courſe of Nature, though thoſe common and uſual Accidents of common Sickneſſes, ordinary Caſualties, and common Events are incident to Humane Nature; the number of Mankind doth and muſt neceſſarily increaſe in the World, and the Natural Supplies of Mankind are greater, and more numerous than the Decays thereof.

thereof. I now therefore come to the Second Conſideration, namely, The Examination of the extraordinary or more univerſal Correctives of the Multiplication of Mankind, which becauſe it will be large, I ſhall allow unto it a diſtinct Chapter.

CAP. IX.

Concerning thoſe Correctives of the Exceſs of Mankind which may be thought to be ſufficient to reduce it to a greater Equability.

I Come now to the Second premiſed Conſideration and Inquiry, *viz.* Whether there may not be found ſome extraordinary Occurrences and Correctives, that may reduce that otherwiſe Natural and ordinary Increaſe of Mankind to an Equability: And I call them Extraordinary, not ſimply in reſpect of themſelves, but in oppoſition to thoſe daily and ordinary Caſualties which happen to Humane Nature; and in reſpect of thoſe great Diſtances and Periods, whether certain or caſual, wherein they may be ſuppoſed to happen: And I ſhall improve this Objection againſt the Increaſe *de facto* of Mankind, with the greateſt impartiality and advantage that may be.

It is certain that the Increaſe of Brutes, and other Animals which are perfect and univocally generated, is very great in the World: *Ariſtotle*, that inquiſitive Searcher into Nature, in his 4th Book of the Hiſtory of Animals hath given us an Account touching moſt Animals, of the length of their Lives, times of their Breeding, intervals of their Birth; wherein though poſſibly there may be variation in ſeveral Climates, yet his Account may give a near eſtimate, proportionable alſo to other places.

For Inſtance, the Cow breeds in the ſecond Year, brings forth the tenth Month; lives 15 or 20 Years: the Mare breeds the third Year, brings forth in the twelfth Month; lives 25, 30, and ſometimes 40 Years: the Sheep and Goat bear in the ſecond Year, bring forth in the beginning of the ſixth Month, ſometimes two, ordinarily but one; lives 10, 12, or 13 Years: Sows breed in the ſecond Year, bring forth after four Months; their Young numerous: Bitches breed in the latter end of the firſt or beginning of the ſecond Year, bring forth after threeſcore Days, or in the ninth Week; their Young many, 5, 6, or ſometimes 12; they live 10 or 12, ſometimes 15 or 20 Years: Wolves breed and bring forth as Dogs, only their number fewer, ſometimes 2, ſometimes 3, ſometimes 4: the Doe brings forth after eight Months complete, but one, and ſometimes two; and live long: the Fox breeds 4, the Cat 5 or 6; and lives 6 Years, many times more: the ſpeedy and numerous increaſe of Mice is prodigious; *Ariſtotle* mentions 120 produced of one Female in a very little time; *Pliny* in his 11th Book, *Cap.* 63. hath in effect tranſcribed *Ariſtotle* herein.

By this it appears, That the Natural Increaſe of theſe Animals is much greater than of Men, yet their numbers have not arrived to that great exceſs,

excess, because those that are for food have their reduction by their application for that purpose; those that are domestical, and not for food, as Cats and Dogs, are kept within compass by drowning or destroying their Young; and those that are noxious, as Wolves and Foxes, are reduced by that common destruction that Men pursue them with.

Touching Birds, their Increase seems to be much greater than of Men or Brutes, but they have those reductions that bring them to a fair equability, unless it be in those Islands and Rocks in the Sea unaccessible by Men, where Sea-Fowls breed. First, their number is reduced by Man for food: 2. For destruction, as in Birds that are noxious: 3. By the natural shortness of the Lives of many that are yet numerous breeders: 4. By the mutual destruction of the weaker by Birds of prey; whereof more particularly hereafter: 5. By the Winter cold, which starves very many, either for want of heat or food; and of this more hereafter.

Fishes are infinitely more numerous or increasing than Beasts or Birds, as appears by the numerous Spawn of any one Fish, though ordinarily they breed but once a Year; and if all these should come ro maturity, even the Ocean it self would have been long since over-stored with Fish. Now the Correctives and Reductions of these are very many. 1. *Aristotle* observes in his 6th *de Historia Animalium*, *cap.* 13. Those Eggs that are not sprinkled, *aspergine seminis genitalis maris*, prove unfruitful; a great part are devoured by the Male, and much more by other Fish: some of their Eggs are buried in the slime, and corrupted. 2. Many are taken by Men, and employed for food. 3. As among Birds and Beasts they are Beasts and Birds of prey, which are less numerous than others, so especially among Fish: And though the Wisdom of Providence hath given certain Expedients to Animals, especially Fishes of the weaker nature, to escape the voracious; as swiftness to some, smalness to others, whereby they escape to Shallows and Shoars unaccessible to the greater: and to those that are not able to move, or at least not to move swiftly, the protection of Shells; as Oysters, Escalops, Crabs, Lobsters and other Shell-fish; yet a very great number are devoured by the voracious kind. I do remember, that a Friend of mine having stored a very great Pond of 3 or 4 Acres of ground with Carps, Tench, and divers other Pond-fish, of a very great number, and only put in two very little small Pikes; at 7 Years end, upon the draught of his Pond, not one Fish was left, but the two Pikes grown to an excessive bigness, and all the rest, together with their millions of Fry devoured by those pair of Tyrants. 4. Birds also of prey, as Storks, Herons, Cormorants, and other Fowl of that kind destroy many both in the Sea, Rivers, Ponds and Lakes. 5. Extreme Frost, especially in Ponds and Lakes, make a great destruction of Fish, partly by freezing them, partly by the exclusion of the ambient Air, which insinuates it self into the Water, and is necessary for the preservation of the Lives of those watry Inhabitants. 6. By great Heats and Droughts, not only drying up Lakes, Ponds, and Rivers, but also tainting the Water with excessive heat; and though these two do not so much concern Sea-fish, who have more scope and room, yet they have a great influx upon Rivers, Ponds, and Lakes.

Again, to say something of Insects, whether aiery, terrestrial, or watry; they

they seem to be more numerous than the common sorts of univocal Animals, who have an univocal production. For first, their first production is strangely numerous, out of Putrefaction and much Moisture, influenced by Heat. Hence *Diodorus Siculus* in his first Book tells us of the numerous productions of Mice after every Inundation of *Nilus*, sensibly and visibly growing out of the slime; *Juxta Thebaidem, cum Nili cessavit inundatio, calefaciente Sole limum ab aqua relictum, multis in locis ex terræ hiatu multitudo Murium oritur:* which *Aristotle* also observes, as frequent in other places, *lib. 5. de Histor. Animal. cap. 37. Locis enim compluribus tam inaudito modo oriri solent, ut parum ex universo frumento relinquatur.* And in my remembrance, after the drayning of the great Level in *Northamptonshire*, and other Shires, such an innumerable company of Mice did upon a sudden in the Summer time arise, as it were immediately out of the slimy Earth warmed by the Sun, that they were constrained to cut their Banks to drown the Lands, and so cure one Inundation with another.

The like numerous production of Frogs happens in some Years, which *Aristotle* in the first Section of his Problems, and Sir *Francis Bacon* out of him makes a Prognostick of a sickly Year; because such Productions are the effect of a great degree of Putrefaction in the Elementary Bodies. And we read, that in *Norway* there was not long since such innumerable company of Field-Rats of a new Make produced, somewhat larger than Rats, that they threatned a general Consumption of all their Fruits, but by some extreme hard weather they were destroyed; yet so as the multitude of their Carcases produced a noysom Contagion in the Countrey. And the like numerous production every Year gives us, though some Years more than others, of divers other kind of Insects, as Flies, Locusts, Worms, Caterpillars, and divers others, which in some Countries so abound, that they cover the face of the ground, especially in the parts of *Africa: quod vide*, in the 9th Book of *Leo* his History of *Africa*, and those additions out of *Paulus Orosius* and *Alvarez* in confirmation thereof.

2. As this original spontaneous production is very numerous, so the multiplication of these Insects by their Eggs or Seeds is infinitely more; their Lives are short, some dye within the compass of one Summer, as the Silk-worm: yet a curious Observer of that Insect, namely *Malpighius*, hath given us an account of the number of Eggs of one Silk-worm in one Year to be above 500; though all possibly prove not fruitful, yet preserved carefully from the injury of the Winter, many of them come to perfection the next Spring: And it is apparent that the *Erucæ*, Caterpillars and Worms we see upon Hedges and Leaves, multiply their Seeds to a very great excess; and this is much more visible in the Spawn and production of Frogs, and also in the multiplication of Mice, the blowings of Flies, and almost all kind of Insects; though their Lives are shorter, yet their productions are more numerous and frequent in the short Period of their Lives, than the perfect Animals. So that if there should not be some Corrective of the excesses of their Productions, the whole Atmosphere, Earth and Waters would be crouded with their numbers: The contrary whereof is nevertheless apparent, for the multitudes of one Summer are for the most part exhausted, and invisible by the next Spring.

The Correctives therefore of the numerous Excess of Insects seem to

be principally these: 1. The Industry of Mankind, in destruction of noxious Insects. 2. The Wise Providence hath placed a certain Antipathy between some Animals, and many Insects, whereby they delight in their destruction, though they use them not as food: As, the Peacock destroys Snakes and Adders; the Weasel, Mice and Rats; Spiders, Flies; and some sorts of Flies destroy Spiders. 3. The common sort of Insects are the ordinary food of divers Animals, as well Insects as others: The Spider and all sorts of small Birds, especially the Swallow, feed upon Flies; the Mole feeds upon Worms; Ducks and divers Water-fowl upon Frogs; the Cat and Owl upon Mice: and thus Insects become the prey of other Animals, which correct their excess. 4. As the hot and moist temperament of the Air and Earth produce and increase Insects, so that temperament of the Air, Earth, and Waters that seems most opposite to Putrefaction, either destroys many of the Individuals, or at least renders their numerous Eggs and Seeds unfruitful, and resists as well the original Production of them from Putrefaction, or abates the Prolifick power of their Eggs or Seeds. 5. Great Rains, and Showers, and Inundation of Waters drowns oftentimes many sorts of Insects, and renders their Seeds and Eggs unprolifick, or destroys them. 6. But especially the Winter Cold, Frost and Snow do kill many Insects, and their Eggs and Seeds, and renders them unfruitful. The Cold and Winter season is a great Enemy not only to Insects, but to many sorts of Birds, Beasts and Fishes: and therefore *Aristotle* most truly observes in his 8th *Hist. Animalium, cap.* 13, 14, 15, 16, *&c.* that to avoid the severity of the approaching Cold, many of them retire into the closest and warmest Caverns they can get; wherein some lye for many Months without the benefit of Food, and if they escape the severity of the Cold, they as it were revive the next Spring. For instance, Serpents hide themselves 4 Months, Swallows betake themselves all the Winter to low Vallies and Caverns, Tortoises close up themselves in Holes and Earth all the Winter, as is obvious to daily Experiences; *Et Insecta penè omnia conduntur, præter ea quæ vitam in domiciliis cum hominibus agunt, quæque prius intereunt quam omnino tempus excedunt.* And therefore Bees keep themselves close in their Hives, *ab ortu Vergiliarum*, till the next Spring. And yet, though Nature hath given Insects this Sagacity to avoid the Winter Cold, yet they are not always successful in it, but the severity of the Winter finds them out, and destroys them: But as for their Seeds or Eggs, which in the precedent Summer are laid up and down upon Leaves, and in other places, they are for the most part destroyed by the Winter; except such as casually by the Wind or otherwise are dispersed, and lodged in safer Receptacles, and thereby survive the inclemency of the Winter, and yield a new Production or Increase the next Spring.

And thus we have seen the Methods and Correctives, that by the Divine disposition of these small and inconsiderable pieces of Nature are used; whereby at once there is a preservation of the Kind of those little Animals, and yet a prevention of that Excess and Redundance which would happen by their numerous Increase, to the detriment and surcharge of the inferior World.

In all this Consideration of the Reduction of Excesses and Increase of Animals and Insects, two things are observable in a special manner, namely;

1. That

1. That in the ſtate of Animals and Inſects, we may ſee ſomething that is analogal to the ſtate of the Elementary and mixed Inanimate Bodies; that there are ſome more active and vigorous Qualities, that ſeem continually to exerciſe a Sovereignty and Tyranny over the more paſſive and weak Natures, and prey upon them: Thus Heat, and alſo in ſome degree Cold, are always perſecuting and foyning at the weaker and more unactive parts of Nature: So among Brutes, Birds, Fiſhes, Inſects there is a continual invading and prevalence of the more powerful, active and lively, over the more weak, flegmatick, and unactive Creatures; the Bear, Lion, Wolf, Dog, Fox, *&c.* purſue the Sheep, Oxen, Hare, Coney, *&c.* and prey upon them: the like is evident among Birds and Fiſhes, and generally Inſects, being the weaker and more inconſiderable parts of Nature.

2. That the viciſſitudes of Generation and Corruption are by a kind of ſtanding Law in Nature fixed in things, and the Notions and Qualities of Natural things are ſo ordered, to keep always that great Wheel in circulation; and therein the Acceſſes and Receſſes of the Sun, the Influxes of the Heat thereof and of the other Heavenly Bodies, and the mutual and reſtleſs Agitation of thoſe two great Engins in Nature, Heat and Cold, are the great Inſtruments of keeping on foot the Rotation and Circle of Generations and Corruptions, eſpecially of Animals and Vegetables of all ſorts.

3. That yet theſe Motions of Generations and Corruptions, and of the conducibles thereunto, are ſo wiſely and admirably ordered and contemperated, and ſo continually managed and ordered by the wiſe Providence of the Rector of all things, that things are kept in a certain due ſtay and equability: and though the Motions of Generations and Corruptions, and the Inſtruments and Engins thereof are in a continual courſe, neither the exceſs of Generations doth oppreſs and over-charge the World, nor the defect thereof, or prevalence of Corruptions doth put a Period to the *Species* of things, nor work a total Diſſolution in Nature.

And upon this ſeemingly impertinent Diverſion touching the Reductions and Correctives of theſe inferior Animals, there may ſeem to be collected reaſonably an analogical Inference of the like means of the Correctives of the Generations of Mankind; and that although in an ordinary courſe of Humane Productions the Increaſe ſurmounts the Decay, yet there may be reaſonably ſuppoſed ſuch Periodical Corrections as might fairly keep the ſtate of Mankind in a mediocrity and equability, although it ſhould be ſuppoſed the Generations of Mankind had been Eternal.

And although theſe Correctives may not happen every Day, or every Year in the ordinary courſe of things, and therefore may be called extraordinary, becauſe they are leſs ordinary than the common Caſualties of Mankind, as Sickneſs or Accident that happens to this or that individual Perſon promiſcuouſly; yet they are in truth no more extraordinary, than a cold Winter is extraordinary; which although it is not every Day, nor doth it happen every Year poſſibly in an equal Degree, yet it is no extraordinary thing in Nature, if it happens once in 5, or 10, or 20 Years.

Having therefore considered these Correctives in the inferior Animal Nature, I shall now search out what may be those Correctives, that may be applicable to the Reductions of the Generations of Mankind to an Equability, or at least to keep it within such bounds as may keep it from surcharging the World; whereby if in the Period of 2, or 3, or 4000 Years it may grow too luxuriant, yet it may in probability be so far abated, as may allow it an Increase of the like number of Years to attain its former proportion. So that by these Prnnings there may be a consistency of the Numbers of Mankind, with an eternal succession of Individuals.

Those Reductions that may be supposed effectual for these Ends, and such as the course of Mankind seem to have had great Experiences of, are, 1. Plagues and Epidemical Diseases: 2. Famines: 3. Wars and Internecions: 4. Floods and Inundations: 5. Conflagrations.

1. Concerning Plagues and Epidemical Diseases, the Histories of all times give us Accounts of the great Devastations that they have made in many places: and sometimes it hath been, it is true, only in some particular Regions or Cities, but at other times it hath been more universal; and although at the same time, in some Seasons, it hath not universally prevailed, yet it hath gradually and successively moved from place to place.

The ancient Plagues of former Ages in Forein Parts have been very terrible, and cut off multitudes of People: See a Collection of some of them by Dr *Hakewill, lib. 2. sect. 3.* as, namely, That Plague in *Ethiopia*, and also in most parts of the *Roman* Empire, in the Year of Christ 250; which continued 15 Years, and left not so many People in *Alexandria* as there were formerly aged Men: that under *Justinian*, in *Constantinople*, and the parts adjacent; wherein there dyed 10000 in a Day: that in *Africa*, whereby according to *Procopius*, in the Country of *Numidia* there dyed 800000 Persons: that in *Greece*, under *Michael Duca*; which so prevailed, that the living were not sufficient to bury the dead: and that in *Italy*, in the Year 1359, whereby there were not left ten of a thousand; this possibly may be the same mentioned by *Walsingham*, but referred to the Year of Christ 1349; that prevailed over the World, beginning in the Northern and Southern parts, that the living were not able to bury the dead: *Existimabatur à pluribus, quod vix decima pars hominum fuisset relicta ad vitam:* and presently after followed a great Murrain of Cattel; so that he concludes, *Tanta ex his malis miseria secuta est, quod mundus ad pristinum statum redeundi nunquam postea habuit facultatem. Vide Lipsium de Constantia, lib. 2. cap. 23.*

And if we look upon our own Country, besides those great Plagues that have been in a manner universal, there have been very many such in *England*; sometimes more general, sometimes more circumscribed to particular Cities or places: As that Plague in the North parts of *England*, mentioned by *Walsingham* in the beginning of *R. 2.* that in a manner depopulated those Parts: that mentioned by the same Author, *Anno 7 H. 4.* whereby there dyed in one Year 30000 in *London* (which was considerable then, considering the narrowness of the City in those days, comparatively to what it now is) besides the great desolation it made in the Country.

If

If we come to latter Years, both in *England* and in Forein Parts, the Obſervator of the Bills of Mortality before mentioned hath given us the beſt Account of the Number that late Plagues have ſwept away; for Inſtance,

In *London*,	*Anno Dom.* 1592, of the Plague—	11503
	Anno Dom. 1593 ——	10662
	Anno Dom. 1603 ——	30562
	Anno Dom. 1625 ——	35400
	Anno Dom. 1636 ——	10400
	Anno Dom. 1665 ——	68596

We have alſo Accounts of the great Devaſtations made by the Plague in late Years in Forein Parts:

In *Amſterdam*, between 1622 and 1664 ——	84564
And in the Year 1664 ——	24148
Anno 1637 at *Prague* ——	30000
Anno 1652 at *Cracovia* ——	37000
Anno 1656 at *Naples* ——	30000
Anno 1657 at *Genoa* ——	70000
Anno 1619 at *Grand Cairo* in 10 Weeks—	73500

And *Leo* in his Hiſtory of *Africa*, tells us, that the Peſtilence is ſo hot ſometimes in that City, that there dye 12000 almoſt every Day; and *Pliny* in 7. *Nat. Hiſt. cap.* 50. ſaith that the Southern Plagues happen moſt in the Winter, and move Weſtward, according to the courſe of the Sun; which ſome have obſerved alſo in the Northern, that it ſometimes held a gradual Motion, and for the moſt part Weſtward; as in 1652 at *Cracovia*; 1653 at *Dantzick*; 1654 at *Copenhagen*; 1655 at *Amſterdam*, and other Towns in the *Netherlands*; 1656 at *Naples* and *Rome*; 1657 at *Genoa*. And I have ſomewhere read, that in *Alexandria* in *Egypt* the Plague is Anniverſary, beginning with the Riſing of *Nilus*, which is about the 17th of *June*, and continueth riſing 40 Days, ſometimes 12, ſometimes 15 Cubits, and in its greateſt exceſs to 18 Cubits, and as many Days decreaſeth; ſo that the Plague laſteth 80 Days, and then perfectly ceaſeth with the full Ebb of *Nilus*.

So that upon the account of Plagues, and extraordinary Epidemical Diſeaſes, there ſeems to be a great Corrective of the Redundance and Increaſe of Mankind.

2. Let us a little take notice of Famines, which though they have not been of late times much obſerved, partly becauſe of the great Induſtry of Mankind, improving and increaſing the Fruits of the Earth; partly by thoſe Supplies that have come by Sea to thoſe Countries that are in want; but principally by the goodneſs of God, in lending the Children of Men ſeaſonable Weather, and fruitful Seaſons, and proſperous Influences: yet in former times they have been very grievous, and deſtroyed multitudes of People.

Walſingham in the Life of *E.* 2. tells us of ſo ſevere a Famine in *England*, that they were enforced to eat Dogs and Horſes, yea and ſtole Children and eat them; *viz.* 9 *E.* 2. And divers other Inſtances our own Hiſtories give us of other great Famines in this and other Countries.

Ordina-

Ordinarily a Famine and a Plague anciently went together, or the former followed upon the heels of the Plague, by reaſon of ſome of theſe means: 1. Commonly the ſame diſtemperature of the Air that occaſioned the Plague, occaſioned alſo the infertility or noxiouſneſs of the Soil, whereby the Fruits of the Earth became either very ſmall, or very unwholſom: As it happened in that Famine under *E.* 2. above mentioned, in ſo much that the Hiſtorian tells us, that *Medicinales herbæ, quæ levamen languidis conferre ſolebant, per Veris intemperiem & Elementorum inæqualitatem, contra naturam effectæ degeneres, virus pro virtute reddebant.* 2. Commonly the Plague among Men was accompanied or followed with a Rot or Murrain among Cattel, whereby the fleſh of Beaſts was wanting, or noxious to thoſe that uſed it. 3. Commonly by a great and general Mortality or Plague the Husbandmen and Labourers were ſo diminiſhed, that there wanted People to gather in the Harveſt, or Till the Ground, whereby there neceſſarily enſued a Famine: And oftentimes by a kind of neceſſity Famines were durable, the Stock being exhauſted one Year, left little for the ſupply of Tillage, Husbandry, or Increaſe for the next.

And as Famine was anciently the Concomitant or Conſequent of Plague, ſo both Plague and Famine, eſpecially the latter, were the uſual Conſequents of War, which bring with it Devaſtation and Deſtruction, and a general intermiſſion of that Husbandry and Care that ſhould ſupply it.

The terrible Effects of Famine, and the great Conſumption of Mankind that is occaſioned, was principally 1. Of the Poor, who upon the bare increaſe of the Price of Victuals, and wanting wherewith to buy, muſt needs occaſion their ſtarving, or a tumultuous gaining it by force, where they could not get it; which was but a ſhort and temporary Relief, and made more want after, by the ſpoil and diſorder occaſioned thereby. 2. Of numerous Armies, who being brought into places of want or ſcarcity without due Conduct or Proviſion, are oftentimes deſtroyed in a Week, eſpecially in cloſe and long Sieges, as it happened in *Samaria* when beſieged by the *Aſſyrians*, and *Jeruſalem* when beſieged by the *Romans*, wherein more dyed by the Famine than by the Sword.

So that Famines as well as Plagues ſeem to give a great Reduction to the Numbers of Mankind.

3. A few words may ſerve concerning Wars, which are ſo frequent, and bring ſo great a Deſolation upon Mankind, that it ſeems to equal that allay of the Exceſſes of Brutes, Fiſhes, Birds, and Inſects, by the other Beaſts, Birds, or Fiſhes of prey; and the rather, becauſe many if not all the conſiderable Parts of the World are ſome Years at it, though it may be ſome Ages free from Peſtilences and Famines (other than ſuch as are conſequences of War) but in no Age nor Year of the World hath it been quiet from Wars, and thoſe calamitous conſequences thereof, at leaſt in ſome conſiderable parts of the World.

It would be endleſs, and indeed Morally impoſſible, to give an Account of the Numbers of People and Armies that have been cut off by Wars, eſpecially on the ſide of the Conquered. Some few Inſtances may give ſome kind of Eſtimate herein.

Diodorus Siculus in his third Book tells us, that *Ninus* in his Preparation againſt

againſt the *Bactrians* gathered an Army of 1700000 Foot-men, 200000 Horſe-men, 10600 Chariots: that *Zoroaſtres* his Army conſiſted of 400000, who in the firſt Conflict prevailed, and killed 40000, but were afterwards wholly deſtroyed; ſo that probably in that War there fell no leſs than 400000 Men: *Darius Hyſtaſpis* in the Battel of *Marathron*, whether he came with an Army of 600000, loſt in one Battel 200000: his Succeſſor *Xerxes* went into *Greece* with an Army, according to ſome, conſiſting in the whole number of it and its Appendices, of five Millions; thoſe that ſpake moſt ſparingly, of above one Million; all which within the ſpace of five Years were in effect wholly loſt. *Vide Lipſ. de Conſtant. lib. 2. cap. 21, 22, 24.* *Alexander* deſtroyed the Army of *Darius*, conſiſting of a Million of Men, the greateſt part whereof fell by the Sword: and *Pliny* in his 7th Book of his Natural Hiſtory, *Cap.* 15. tells us, that *Julius Cæſar*, and his Armies in the time of his Command, killed 1192000 perſons, beſides thoſe that he ſlew in the Civil Wars: And if by the Eſtimate of that one Man, we might make a Calculation of thoſe that were ſlain by the *Aſſyrian*, *Babylonian*, *Perſian*, and *Grecian* Monarchies, by *Cyrus*, *Darius*, *Aſtyages*, *Alexander* and his ſucceeding Captains; by *Marius*, *Sylla*, *Pompey*, *Veſpaſian*, and the ſucceeding *Roman* Emperors; by *Tamberlane* and the *Scythians*; by the *Goths*, *Vandals*, *Turks*, *Tartars*, *Muſcovites*, *Perſians*, *Moors*, and *Chriſtians*; by the Wars in this little Spot of *England*; by the late Wars in *France*, *Spain*, *Germany*; by the *Spaniards* in the *Weſt Indies*, the numbers of Internecions and Slaughters would exceed all Arithmetical Calculation.

So that it ſhould ſeem, there needed no other Reductive of the Numbers of Men to an Equability, than the Wars that have happened in the World.

And although Wars are in a great meaſure accidental, or at leaſt proceed in a great meaſure from the Wills of Men, their Pride, Ambition, impatience of Injuries, affectation of Dominion, mutual Jealouſies and Fears of the Potency of each other, and oftentimes accidental Emergencies and Occurrences; yet it ſeems, that abſtracting from all theſe Occaſions, Wars ſeem to be in a manner a Natural Conſequence of the over-plenitude and redundancy of the Number of Men in the World: And ſo by a kind of congruity and conſequence, morally neceſſary when the World grows too full of Inhabitants, that there is not room one by another; or that the common Supplies which the World ſhould afford to Mankind begin to be too few, too ſtrait, or too narrow for the Numbers of Men; that natural propenſion of Self-love, and natural principle of Self-preſervation will neceſſarily break out into Wars and Internecions, to make room for thoſe that find themſelves ſtraitned or inconvenienced.

So that as when the Channel of a River is over-charged with Water more than it can deliver, it neceſſarily breaks over the Banks to make it ſelf room; or when the very Brutes or Animals find themſelves oppreſſed and ſtraitned in their proviſions and ſupplies, by the redundance of their numbers, one neceſſarily preys upon another, or deſtroys another to preſerve it ſelf: So Wars among Mankind are a kind of neceſſary Conſequence of Redundance of Mankind, and will by a kind of Natural neceſſity make it ſelf room, and give it ſelf eaſe by the deſtruction of

others;

others, if it can get power and opportunity to do it: And consequently there seems to be no fear of the surcharge of the World with Mankind; because there is this natural and necessary Remedy at hand; the very Redundance it self of Mankind seeming by a natural consecution to yield and subminister this Remedy, for its Reduction and Equation. As in a redundance of Humors in the Body, the most lively and active do naturally thrust out those that are weaker or noxious, to make room for themselves: or as Bees swarm to get new habitations, when they are so increased that their Hives will not hold them.

4. Concerning the Fourth, and also, inclusively the Fifth Corrective of the Excess of Mankind, namely, Inundations and Conflagrations.

Those that have been Observers of things in Nature and Histories of former times, have given us Instances of two kinds of Mutations in this Terrestrial Globe of Earth and Waters: some that are more ordinary, and of less moment, and of such various have been in the World; such are those mentioned especially by *Pliny* in his Natural History, *lib. 2. cap. 85. & seqq.* some places severed from the Continent by the interruption of the Sea; thus he tells us that *Sicily* was divided from *Italy*, *Cyprus* from *Syria*, *Eubœa* from *Bœotia*, *Atlantis* and *Macris* from *Eubœa*, *Bosticum* from *Bythinia*; and some have thought, though perhaps upon very small evidence, that *England* and *France* were sometimes one Continent, and divided by the interruption of the Sea; and *Spain* from *Africa*. Again, some Cities and Countries swallowed up by the Sea; as *Pirrha* and *Antissa*, *Elis* and *Buta*, half the City of *Tyndaris* in *Sicily*, and 30 Miles of the Island *Cea*, with a great destruction of Men and Cattel: some Countries wholly swallowed up and drowned in the Sea; as *Acarnania*, *Achaia*, part of *Europe* and *Asia* in *Propontis*: but above all, that great Island of *Atlantis*, supposed by *Plato* in his *Timæus* to be greater than *Lybia* and *Asia*, swallowed up in the *Atlantick* Ocean, to which it gives its denomination: but *Plato* is oftentimes so Poetical, that we can hardly tell where he means in earnest.

But on the other side, many times the Sea by a certain recompence makes new room for the Inhabitants of the World, sometimes by producing notable Islands; thus the same *Pliny* tells us that *Delos*, *Rhodes*, *Anaphe*, *Nea*, *Thera*, and *Teresia*, *Hiera*, *Automate*, *Thia* were produced.

Again, the Sea hath deserted vast Tracts of Ground in divers places, and left them dry Land, as is related by *Aristotle* in the second of his Meteors, *Cap.* 14. and by *Pliny* in a great measure, out of him and *Herodotus*. Thus considerable quantities of Land were left by the Sea at *Ephesus*, at *Ambracia* and other Parts; and that a very great part of *Egypt*, namely, that called *Delta* is but the accretion of *Nilus*, and was sometime covered with Water: and according to the conjecture of *Herodotus*, the Sea possessed *Memphis* and a great part of *Egypt*, to the Mountains of *Ethiopia*. But these are but Conjectures of the Historian, of what might be in some thousand Years before he was born. *Aristotle* indeed supposeth, that the City *Thebes* and the adjacent Parts, were all that were habitable in *Egypt* in the time of *Homer*, because he makes no mention of *Memphis*.

But these smaller Vicissitudes, and mutual borrowings and payments between the Earth and Sea, are not those Mutations which so much

contri-

contribute to the Reduction of Mankind; partly, becauſe they are gradual and give Men opportunity to eſcape; and partly becauſe they are not ſuch Devaſtations as may be *pares huic negotio* (unleſs we believe that wonderful ſwallowing up of the vaſt Iſland, or rather Continent of *Atlantis*,) and partly becauſe the Sea, which commonly gives in one place what it takes in another, and ſo makes room for the Inhabitants of the World in compenſation of what it takes.

2. Therefore I come to thoſe greater ſuppoſed Correctives, namely, 1. Floods and Inundations: 2. *Incendia*, Burnings; and again, both, or either of thoſe are alſo varied, according to the Opinions of ſome of the Ancients.

1. They are either ſuch as were all at one time, and did wholly overwhelm and confound this lower World: or 2. They are ſuch as did not wholly diſſolve the lower Word, or put a period to all things living therein.

Again, the former Opinion that held theſe Cataclyſms and Empyroſes univerſal, was ſuch, as either held that it put a total Conſummation unto things in this lower World, eſpecially that of Conflagration: Or elſe ſuch, as though it quite for the preſent confounded the Face of things, eſpecially in this inferior World; yet it was but preparative to a new Formation of things, wherein all things would be put into better Order, till in proceſs of time they again degenerate, and ſo were to receive another Purgation by Fire or Water, according to the fatal Viciſſitudes to which the World is ſubject: And they ſuppoſe, that theſe ſucceſſive unmaking and making again of the World (not unlike the Suppoſitions of *Anaxagoras* or *Empedocles*) were Eternal, and ſhould eternally continue in this Viciſſitude; that the laſt Deſtruction of the World was by Water, and that which is to ſucceed is by Fire: And this was for the moſt part the Opinion of the *Stoicks*, whereof *Lipſius* in his ſecond Book *de Phyſiologia Stoicorum*, *cap.* 21, 22, *&c.* hath given us a large Account, out of *Seneca* eſpecially, and others which are not neceſſary to be repeated; and the rather, becauſe they do ſuppoſe that Mankind is neither Eternal nor Perpetual, according to the courſe of Natural Generation: For theſe mighty Concuſſions of Nature, eſpecially that of the Univerſal Conflagration, puts an end to all the Race of Mankind and all living Bodies; though in the Redintegration of the World after theſe Deſtructions there is alſo a Re-production of Mankind, but not by the ordinary method of Propagation as now.

Again, as to thoſe others that held alſo certain Periodical Cataclyſms and Conflagrations, yet they held them not to be Univerſal, nor any Univerſal Diſſolution or Deſtruction of the inferior World thereby; but they were ſuch as were great and notable Devaſtations, ſometimes in one part of the Earth, ſometimes in another; either by certain Rotations, or at leaſt in ſome places more than in other, acocrding to the accommodation or diſaccommodation of them to ſuch Calamities: As the Vallies and lower grounds were more ſubject to devaſtation by Floods, ſo the more Mountainous parts were more ſubject to the deſolations by Fire and Conflagrations.

Plato, who ſeems very uncertain and unſetled in his Philoſophy, ſeems yet to agree with this partial kind of exhauſting the num-

bers of Men and Brutes, by such partial Floods and Conflagrations.

In his third Book of Dialogues, *de Legibus*, he gives us an Account of various Methods of the Declinations of Civil Societies, and of those Laws and Customs, Arts and Sciences in several parts of the World: and again, how and by what degrees they have been repaired and recovered; the means whereof he assigns not only to be Wars and Epidemical Diseases, but great Floods and Conflagrations, which, together with those of *Aristotle* relating thereunto, I shall transcribe out of the *Latin* Translation, because perchance more significant than the *English*, though not so significant as the Language wherein they wrote. And this I do intend to transcribe more largely, because they seem to contain the full declaration of the Instances of this nature.

He tells us therefore in the beginning of his third Book *de Legibus*; *Multos hominum interitus ex diluviis, morbis, aliisque permultis, olim accidisse, ex quibus pauci homines superstites fuerunt.* Again: *Eos qui clademtum evaserunt (scilicet ex diluviis) montanos quosdam pastores fuisse, in montium cacuminibus pauca semina ad propagandum genus humanum conservata: atqui necesse est eos aliarum artium fuisse expertes, campestres autem & maritimæ urbes funditus illo tempore perierunt. Instrumenta igitur omnia, & quæcunque artium sive ad disciplinam civilem sive ad facultatem aliam pertinentium, extabant inventa, concidisse illis temporibus.* And afterwards: *Ex ea itaque devastatione magnam terribilémque humanis in rebus desolationem tunc actidisse arbitramur; fertilium agrorum magnitudinem desertam, cæterisque animalibus corruptis, vix boum caprarúmque genus, & illud quidem rarum relictum fuisse, quibus pascendis tunc homines vitam agebant; civitatis verò & disciplinæ civilis & legum memoriam quidem nullam fuisse putamus. Tempore igitur progrediente, &c. genere hominum multiplicato, ad eum quem nunc videmus habitum provecta omnia sunt.*

Again, the same *Plato* though in his *Timæus* he gives us an Account of the Origination of Mankind, yet he supposeth that a vast Period interceded between that Origination and the Age wherein he lived; and within the compass of that Period, that there happened very great and very many vicissitudes of Floods and Conflagrations in this inferior World, whereby the state of things here was variously altered, and the Numbers of Mankind and Animals corrected and reduced at several times to small proportions, only sufficient to repleniſh the World, until such time as its Excess and Increase received again a like Correction or Reduction, by the like Revolutions of Floods and Conflagrations, though still without a total destruction of the *Species*.

In this Book he gives us a personated Discourse between *Solon* and an *Egyptian* Priest, who after some discourse of the Antiquity of *Athens*, the Priest tells him; *Vos Græci semper pueri estis, nec quisquam è Græcia senex, quia juvenis semper vobis est animus, in quo nulla est ex vetustatis commemoratione prisca opinio, nulla cana scientia: Nam quod apud vos fertur Phaetontem quondam Solis filium currus ascendisse paternos, nec patris aurigatione servata, exussisse terrena, ipsúmque flammis cœlestibus conflagrasse; quamvis fabulosum videatur, verum quodammodo esse putandum est: Fit enim longo temporis intervallo cœlestis circuitus permutatio quædam, quam inflammationis vastitas necessario sequitur: tunc hi qui edita incolunt loca magis pereunt quam mari fluviisque vicini. Nobis prorò Nilus cum in plerisque rebus nobis salutaris est,*

tum

tum hujuſmodi à nobis arcet exitium. Quando verò Dii aquarum colluvione ſordes terrarum diluunt, paſtores ovium atque bubulci qui juga montium habitant, periculum illud evadunt; veſtræ autem civitates in planitie ſitæ, impetu fluminum ad mare rapiuntur: Sed in noſtra regione neque tunc, neque alias unquam aqua in agros ſuperne deſcendit; contra verò ſurſum è viſceribus terræ ſcaturit: quamobrem antiquiſſimarum rerum apud nos monumenta ſervantur. Proinde, ubicunque nec imbrium tempeſtas nimia, nec incendium ingens contingit, licèt alias plures, alias pauciores, ſemper tamen homines ſunt. Quæcunque verò ſive à noſtris, ſive à veſtris, ſive aliis nationibus geſta ſunt memoratu digna, modo ad aures noſtrorum pervenerunt, noſtris in templis deſcripta ſervantur. Apud vos quidem & alias gentes res geſtæ nuper literis monumentiſque traduntur, ſed certis temporum curriculis illuvies immenſa cœlitus omnia populatur; ideo qui ſuccedunt, & literis & Muſis orbati ſunt: quo fit, ut quaſi juvenes iterum ſitis, & rudes, præteritarum rerum omnium prorſus ignari. Nam & ea ipſa quæ modo ex veſtris hiſtoriis recenſentur, à fabulis puerilibus parum diſtant; primò, quod unius tantum inundationis memineritis, cum multæ præceſſerint; deinde, quod genus majorum veſtrorum in regione veſtra clariſſimum ignoretis: ex quo, tu, & Athenienſes cæteri nati eſtis, exiguo ſemine quondam publicæ cladis ſuperſtite: quod propterea vos latuit, quia ſuperſtites illi eorúmque poſteri, literarum uſu multis ſeculis caruerunt. Then he tells him of the Building of *Athens* by the Goddeſs *Athena*, 9000 Years ſince, *ex terra & Vulcano accipiens ſemina:* the great Wars between them and the Inhabitants of the vaſt Iſland *Atlantis*, greater than *Lybia* and *Aſia:* the ſwallowing up of that Iſland by an Earthquake, *Fugíque unius diei & noctis illuvione.* Afterwards *Timæus* begins, and proceeds with his Narrative touching the Production of the Univerſe, and therein particularly of Mankind, which I ſhall have occaſion hereafter to mention.

Thus this great Maſter ſeems to countenance the Suppoſition of the viciſſitudes of Conflagrations and Floods, eſpecially of the latter, *certis temporum curriculis*; and thereby the exceſſive multiplication of Mankind corrected, and the viciſſitudes of Arts and Laws interrupted, loſt, reſtored, and repaired: Only he ſuppoſeth *Egypt* free from thoſe Floods and Conflagrations; though it ſeems neceſſary, that if Inundations prevailed in *Greece* and thoſe upper Countries, *Egypt*, that ſeems to lye much lower, could not eaſily eſcape them, though they have no Rain that might occaſion them. But the Prieſt mingles ſome ſtrange and improbable Stories with his Suppoſition of thoſe Viciſſitudes.

Ariſtotle the Scholar of *Plato* differed much from his Maſter: 1. In his manner of writing, which was much more ſteady and ſevere than the Writings of *Plato*, who mingled Poetical Fancies with the things he delivered, and ſeems very uncertain and unreſolved in moſt things of great importance. 2. In his Poſition; for *Plato* ſeems not to hold at leaſt the Elementary World Eternal, though very Ancient: But *Ariſtotle*, following rather the Opinion of *Ocellus Lucanus*, and not being able to digeſt thoſe many difficulties he found in the *Hypotheſes* of the Inception of the World, ſuppoſeth it Eternal, and an eternal conſiſtency in the ſtate it now ſtands; but not without ſome partial, ſucceſſive and periodical Changes in the Elementary World.

And therefore in this Suppoſition of the ſucceſſive partial Floods or Inundations, and Conflagrations, whereby great Changes happen,

and a fair Corrective and Reduction of the Excesses of Mankind, he much agrees with *Plato*. And he gives us a large and learned Account of his Judgment herein, *Lib.* 1. *Meteor. cap.* 14. in these Words; *Eadem terræ loca neque semper fluida, neque semper arida sunt, sed pro fluminum ortu aut defectu, faciem mutant suam: Quamobrem diversitas inter Mare & Continentem existit, nec perpetuo alia pro Continenti, alia pro Mari habentur; sed ubi terra aliquando patuit, mare superfunditur; & ubi nunc mare, terra exaggerabatur. Suspicarique debemus, hæc omnia ita fieri ordine quodam & ambitu; horum autem principium causáque existit, quod interiores quoque telluris partes, perinde atque animantium plantarúmque corpora, juventutem atque senectutem habeant. Verum istis hæc per partem subire nequaquam contingit, sed simul totum juvenescat aut senescat necesse est: Terræ particulatim hoc idem ob frigus & calorem accidit; hæc igitur accrescere simul ac decrescere propter Solis calorem conversionémque assolent.* Then he proceeds to shew, how that successively some parts of the Earth grow mooriſh or watriſh, others dry; where it becomes barren; Fountains and Rivers decay, and sometimes break out in other places; that this makes Changes in the Sea and Land. *At quia omnis quæ circa terram fit generatio non nisi successione & tempore, respectu vitæ nostræ quam longo, fieri solet, ista nobis haudquaquam advertentibus fiunt. Atque prius universæ gentes intereunt pereúntque, quàm horum mutatio ab initio ad finem usquè memoriâ teneri queat: Maximas itaque celerrimásque clades prælia advehunt, alias morbi, nonnullas sterilitates; & hæ quasdam statim magnas, quasdam lentas adeò, ut talium quoque gentium transmigrationes nos lateant, propterea quod alii regionem deserant, alii eo usque sustinent, quoad nullam amplius multitudinem alere regio queat. Inter primam igitur novissimámque loci derelictionem, tempora interveniant adeò longa par est, ut nemo meminisse possit; imò incolumibus etiamnum hisce qui remanserint, longi temporis injuriâ oblivio irrepserit. Eodem autem modo latere existimandum est quando primùm singuli populi, quæ permutata essent & arida à paluſtribus aquosísve facta, inhabitare cœperint.* Then he gives Instance in *Egypt*; *Etenim locus ille totáque regio, quæ fluminis tantum invectu nata est, semper aridior fieri videtur:* That all the *Ostia Nili*, except one, were made by Art, and not by the River: That anciently *Egypt* was no more but the City of *Thebes*; which he proves out of *Homer*; shews, that in the time of *Troy* that part of *Greece* inhabited by the *Argivi* was Mariſh, and had but few Inhabitants, but now become fruitful and populous: That part of *Greece* inhabited by the *Miceni* was fruitful and populous, now become barren. *Quod igitur in isto loco, qui parvus, accidit, hoc idem etiam circa loca magna accidere censeamus oportet.* That there is no cause to conceive the Sea less than formerly; for though some places sometimes covered with Water, are added to the Continent, yet in other places the Sea hath gained upon the Land. *Attamen hujusce rei causa ad mundi generationem haudquaquam referenda; ridiculum enim foret ob parvas brevésque mutationes Universum moveri asserere. Porrò, Terræ moles atque magnitudo ad totum Cælum nihil profectò est. Verum horum omnium causam existimemus oportet, quod ut elapsis certis temporum spatiis, inter anni tempora hyems; ita magno quodam circuitu hyems magna, & imbrium excessu fieri solet: at hic non semper eisdem in locis efficitur, sed perinde ut vocatum diluvium quod tempore Deucalionis accidit; etenim hoc circa Græciam maximè, & eam potissimam partem quam antiquam Hellada vocitant, factum est, &c. Cum autem*

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neceſſe ſit quandam mutationem eſſe Univerſi, non tamen ortum & interitum; ſiquidem ipſum maneat neceſſe eſt non ſemper eadem loca mari, aut amnibus humectari atque ſiccescere, quod reipſa quæ fieri ſolet liquidò conſtat. And concludes, That *Egypt*, *Cujus homines antiquiſſimos eſſe diximus*, is nothing but a Production of the River *Nilus*, that is lower than the *Red Sea*; and therefore that *Seſoſtris* and *Darius* gave over that Attempt of cutting the Neck of Land between the *Red Sea* and *Egypt*, for fear of drowning that Country: That the Lake *Mæotis* is ſhallower, and not able to bear Ships of that burthen as it did 60 Years before, by reaſon of the Slime carried thither, which will in time dry it up: That Lakes grow by the exaggeration of Sand by the Sea, which Lakes in time grow dry: That *Tanais* or *Nilus* and all other Rivers were ſometime dry Land, and did not run where now they do. *At verò ſi amnes habent ortum & occaſum, nec ſemper eadem terræ loca ſcatent aquis, ipſum quoque mare ſimili modo mutari oportet, quod cum aſſiduè alia deſerat, alia invadat, patet univerſæ terræ tractus eoſdem hos Mare, illos Continentem non eſſe, ſed tempore cuncta permutari.*

I have mentioned theſe places of theſe Maſters of Learning and Reaſon the more at large, not only becauſe they herein give the ſharpeſt Objections againſt the neceſſity of a Temporary Beginning of Mankind, by applying theſe Suppoſitions as Correctives or Reductions of the exceſs of the Generation of Men and Animals; but alſo they do diſcover herein ſome things that are uſeful in this Inquiry: For Inſtance, 1. It appears hereby that the Inventions of Arts, Sciences, and Laws might be far more ancient than thoſe times that Hiſtorians gave for their Invention: for they might be in other Places or Ages, and either by a ſucceſſive rotation brought from one place to another, or if they were loſt, yet ſucceſſion of Ages might retrive new Diſcoveries of them again. 2. We have a plain detection of the means whereby poſſibly the *American* People might have their deduction from the *Europeans* or *Aſiaticks*; becauſe it is not impoſſible but the Continents might be in ſome Ages or other contiguous, though now disjoyned by the mutations of the ſituations of Seas; though the certain times of thoſe Changes are not tranſmitted by Hiſtory to our Age. 3. That the ancient Hiſtories of things, by Depopulations, Wars, Famines, Inundations, Tranſmigrations of People, and other Accidents may be loſt in after Ages, which poſſibly in former Ages might be known, and ſome Monuments thereof then extant, which are now obliterated and forgotten.

Thus far concerning theſe Reductives by Inundations and Conflagrations, out of the Princes of the Academical and Peripatetical Philoſophers: We ſhall find the like Suppoſitions frequently among the Stoicks, *Seneca* may be an Inſtance for all that Sect, only theſe vary from the former: for although they do with the former admit and inſtance in temporary and partial Inundations by Earthquakes and other Accidents, *de quibus vide Senecam, l. 3. Nat. Quæſt. de Terræ motu:* yet theſe go farther, and ſuppoſe Univerſal Deluges and Conflagrations, which will quite alter the whole Frame of this lower World, and the whole Face thereof. See the Rhetorical Deſcription thereof, *Senec. in fine lib. 3. Nat. Quæſt. Qua ratione inquis? Eadem qua conflagratio futura eſt; utrumque ſit cum Deo viſum ordiri meliora, vetera finire. Aqua & ignis terrenis dominantur; ex*

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his ortus, ex his interitus. And out of *Berosus* assigns the Times and Periods of these Universal Deluges and Conflagrations: *Arsura enim terrena, quando omnia sidera quæ nunc diversos agunt cursus in Cancrum convenerint, sic sub eodem posita vestigio ut recta linea exire per omnes omnium possit: Inundationem futuram cum eadem siderum turba in Capricornum convenerit; illic solstitium, hîc bruma confinitur.* But yet he supposeth a Restitution of the World after these Destructions: *Nec ea semper licentia undis erit, sed peracto exitio humani generis, extinctisque pariter feris in quarum homines ingenia transierant, iterum aquas terra sorbebit; natura pelagus stare, aut intra terminos furere coget, rejectus è nostris sedibus in sua secreta pelletur Oceanus, antiquus ordo revocabitur: omne ex integro animal generabitur, habitúrque terris homo inscius scelerum, & melioribus auspiciis natus: sed illis quoque innocentia non durabit nisi dum novi sunt, citò nequitia subrepit; virtus difficilis inventu est, rectorem ducémque desiderat; etiam sine magistro vitia discuntur.*

I shall spare mentioning any more to this purpose, though many more Instances may be given out of the Philosophers of all Sects, and Poets, as *Ovid* and others.

Only I shall subjoyn these two Inquiries, and so conclude this Objection.

1. Whence it is that these Ancients had these Conjectures touching these Floods and Conflagrations, so as to frame them into an *Hypothesis* either for the Castigation of the Excesses of Generation, as *Aristotle* and *Plato*; or to the total Dissolution thereof, as the *Stoicks*; and the means that wrought this Perswasion seem to be these:

1. The things that seem to prevail with the *Academicks* and *Peripateticks* for these Partial Floods and Conflagrations, seem to be those dark and obscure Histories of the things of that nature which had twice before happened in *Greece:* Namely, for Floods, the Tradition of the *Diluvium Ogygium*, or *Diluvium antiquius*, which is supposed by Chronology to be under *Ogyges* King of *Attica*, about 1000 Years before the first *Olympiad*; about 248 Years before the Flood of *Deucalion* in *Thessaly*; about 532 after the General Flood in the time of *Noah*; and about the 2951 Year of the *Julian* Period, and of the World 2187, though there is some variation among the Computations of Chronologers. This was a Partial Flood, as it seems, in *Attica*, part of *Greece*. 2. *Diluvium Deucalionis*, which was also Partial, and about 248 Years after the former, in the time of *Cecrops* first King of *Athens*, or as others, in the time of *Cranaus* his Son: This is that mentioned by *Plato* and *Aristotle*, that drowned a great part of *Greece*, only some saved by *Deucalion* by bringing them to the top of *Parnassus:* And out of the History of *Moses* touching the Universal Flood, and the History of *Deucalion*, *Ovid* made up his first Book, attracting in a great measure to the latter what was written of the former by *Moses*.

And for Conflagrations; they had two traditional Conflagrations in and near *Greece*, which might give some countenance to this Perswasion: namely, 1. That of *Phaeton*, *Incendium Phaetontis*, which seems not to be long after the Flood of *Deucalion*, though much of the Relation thereof, as the *Grecians*, and *Ovid* after them made, was a Poetical Fiction; yet it seems it had something of reality in it, as is observed by *Plato*, *ubi supra*.

2. *Id.*

2. *Idæ Incendium*, which was no great buſineſs, but an Eruption of Fire out of the Hill *Ida*, as now in *Etna*: this was about 73 Years after the Flood of *Deucalion*.

2. As to the *Stoicks*, who held Univerſal Inundations and Conflagrations, poſſibly they might have the former of theſe from the Traditional Relation of the Univerſal Flood of *Noah*, which Relation they believed, and upon that founded their Suppoſition of the like Inundations; being acquainted with the Hiſtory of the Flood, but not with the Covenant that God made never to bring a Flood again. 2. As to that of the Univerſal Conflagration of the World, it ſeems it was a known, ancient and received Tradition among the *Jews* before our Saviour's time, reinforced by him and his Diſciples: This ſeems to be implied in that Prophecy of *Enoch*, *Jude* 14. and by ancient Tradition, either from *Noah* or the ancient *Jews* this Perſwaſion might be Traditionally derived to the *Gentiles*, and believed by the *Stoicks*.

2. It appears by what hath been before tranſcribed, That theſe Philoſophers ſuppoſed thoſe Inundations and Conflagrations to be at great diſtances of times, and yet to be in ſome ſort Periodical, and with a kind of ſtated Revolutions. *Plato* ſuppoſeth his Floods to be *certis temporum curriculis*: *Ariſtotle* ſuppoſeth his Floods to be alſo Periodical; *Hæc omnia fieri ordine quodam & ambitu*; and again, *Magno quodam circuitu hyems magna & imbrium exceſſus fiunt*, bearing ſome proportion to our Seaſon of the Solar Year. Therefore it may be fit to conſider what kind of Year this muſt be wherein this *Hyems magna* is ſuppoſed to happen.

Seneca as before hath given us out of *Beroſus* ſome deſcription of the Periods, namely, when all the Planets ſhall meet in one ſtreight Line drawn from the Center of the Earth to the Tropick of *Cancer*, then the great Conflagration ſhall happen; and again, when they meet in the like poſition under the Tropick of *Capricorn*, then the Univerſal Deluge ſhall happen. So that theſe two Conjunctions divide that *Annus magnus* into two parts, and the Summer-Solſtice thereof ſhall be for Conflagration, the Winter-Solſtice for the Inundation, or that *Magna hyems* which *Ariſtotle* hath aſſigned for his Periodical Inundations. But what is that *Magnus annus* wherein theſe Revolutions muſt happen, or what number of Solar Years it contains is uncertain, ſome aſſigning a Period that ſeems too ſhort, ſome a Period of a wonderful length.

Cenſorinus, de Die Natali, cap. 10. ſpeaking of this *Magnus annus* whereof *Ariſtotle*'s Winter ſeems to make the Concluſion, gives us ſeveral Eſtimates of the ſame, ſome making them 2484 Years, others 5552 Years, others 10224 Years, others 100020, others 360000 Years, and others ſuppoſing it Infinite, and that ſuch a Conjunction will never happen.

Macrobius in Somn. Scipionis, lib. 2. *cap.* 11. both deſcribes and determins this *Magnus annus* to be when all the Heavenly Bodies ſhall return to the ſame poſition as they were in any time given, which he reſolves to be 15000 Years, in which all the Heavenly Bodies ſhall be in the ſame poſition as they were 15000 Years before. So that if we ſhould aſſign the *Caput anni* to be be this Day and Year wherein I write, at the end of 15000 Years all the Heavenly Bodies will be in the ſame poſition that now they are; this he calls *Annus mundanus*.

Joſephus, lib. 1. *Antiquitat. cap.* 4. *in fine*, determins that the *Magnus annus*

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is 600 Years; and yet the Flood happened not till 1656 Years from the Creation; which according to the Suppoſition therefore of *Ariſtotle* ſhould be the *Magnus annus*, and that Year the Winter-Solſtice thereof.

Plato ſuppoſeth that the *Magnus annus animarum* is 12000 Years, for in that Period the Soul hath run through all the Spheres and Dances of the Gods and *Dæmons*, and returns to its firſt Station; and the *Annus magnus mundanus* conſiſts of three of thoſe Periods, namely, 36000 Years, wherein the Soul of the World hath performed its great Circuit, or one Revolution of the eighth Sphere: *vide Marſil. Ficin. prolog. in lib.* 10. *Platonis de Republica:* and then not only all the Heavenly Bodies will be juſt in the ſame poſition in which they were 36000 Years before, but all Humane things will be in the ſame ſtate as they were.

Alter erit tum Typhis, & altera quæ vehet Argo
Dilectos heroes; & erunt itidem altera bella,
Ad Trojámque iterum magnus mittetur Achilles.

The *Egyptians* had their great *Apocataſtaſes; viz.* 1. *Apocataſtaſis dierum*, which was 1461 Days: 2. *Apocataſtaſis annorum æquabilium*, which was 1461 Years: 3. Their *Apocataſtaſis magna*, conſiſting of 25 *Apocataſtaſes annorum*, which amounted to 36525 equable Years; which was their *Magnus annus canicularis*, whereunto *Manetho* accommodates his fabulous *Egyptian Dynaſties.*

There ſeems to be another *Annus magnus*, *viz.* the Motion of the ninth Sphere or Chryſtallin Heaven, from Weſt to Eaſt; which though ſome to make it agree with the *Magnus annus Platonicus* ſuppoſe to be 1 Degree every 100 Years, in all performing its Revolution in 36000 Years, according to the great *Platonick* Year; yet *Alphonſus* allows a greater number of Years to that Revolution, *viz.* 49000 Years: and others I think more. But I think that we ſhall not be able to fit the Seaſons of this Year to the *Magna hyems Ariſtotelica*, or his Winter-quarter; becauſe 1. We know not whether any of theſe, or any other that can be found, will ſuit with theſe Inſtances upon which it may be thought he grounds his Suppoſition; for the *Incendium Phaetontis* and the Flood of *Deucalion* happened very near one the other, as alſo the *Incendium Idæ:* and beſides, if that Flood of *Deucalion* had faln within the Winter-quarter of any of theſe *Anni magni*, it would have had a longer Influence upon the World, and extended at leaſt ſucceſſively to all the ſeveral Parts thereof. For the Winter-quarter of the *Magnus annus Platonicus*, if it had any thing of proportion to our Seaſons, muſt have been a fourth part of that *Magnus annus*; and then it had laſted above 8000 Years: But howſoever it muſt upon the loweſt Account have laſted a thirty ſixth part, *viz.* 1000 Years; and then the Effects thereof would certainly have been more permanent and extenſive than to one or two Floods in *Greece.* 2. Again, could we know the extent of this *Magnus annus*, yet we can never find the *Caput anni*, when it begins, and conſequently cannot poſſibly aſſign any probable Period for the Seaſons of it; unleſs we ſhall fondly with *Virgil* ſuppoſe it began with the Birth of his Patron *Pollio*'s Son,

Jam redit & virgo, redeunt Saturnia regna.

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Again, these must needs be meerly Conjectures, and can have no possible Evidence because meerly depending upon Fact and Experience: it is not possible that any Man, or any Age of Men can give us any Account of any one Revolution of this *Magnus annus*, which amounts to 36000 Years.

Therefore it seems difficult, and utterly uncertain to suppose those Inundations and Conflagrations to be Periodical in any proportion to any supposed time or duration.

And thus far touching the urging of this Expedient for the Reduction or Correction of the Excesses of the Generations of Men or Animals, by Periodical Floods or Conflagrations; which though the Generations of Men were supposed Eternal, might Regulate and Reduce their Numbers when beginning to be immoderate, as our annual Winters correct the excrescence of Insects, whose multiplication is far more excessive than that of Men, and would apppear so, if we had a perpetual Summer; yet are reduced to a mediocrity and due equability by the vicissitudes of Winter Cold and Rain.

CAP. X.

The farther Examination of the precedent Objection.

I Have been the longer in the Explication and Inforcement of the former Objection, because as the necessary and sensible Multiplication of Mankind upon the face of the Earth by the ordinary course of Natural Generation, seems to be the most sensible Evidence of Fact against the Eternal Succession of Mankind; so the Reductives mentioned in the foregoing Chapter seemed with most Evidence of Sense to weaken the Inference upon that Observation, and by the Supposition of those continual or interpolated Correctives to render the possibility of an eternal consistence of Propagations of Men, yet without an over-charging of the World with a multitude inconsistent with its reception.

I shall now descend to the Examination of these supposed Correctives of the excess of the number of Mankind, and how far the same may be true; or if true, how far the same may be, or hath been effectual to that end.

Wherein, first I shall set down what is to be agreed touching the same, and wherein we differ from that Supposition of the efficacy, or availableness, or accommodation, or suitableness of these Reductives to the end proposed, namely, to the containing of the Generations of Mankind in such an equability and proportion as may be consistent with an Eternal Succession of them.

Touching the first of these things it must be agreed, 1. That there have been great Devastations and Decrements of Mankind by all or many of the Means mentioned in the former Chapter, namely, Plagues and Epidemical Diseases, Famines, and Sterilities of great parts of the World, Wars and Internecions, not only in Battels and Fights, but even in Per-

ſecutions and Maſſacres, witneſs the great cruelty of the perſecuting Emperours againſt the Chriſtians, the cruelty of the *Spaniards* among the *Indians*, the violent bloodſheds of the Papiſts upon the Proteſtants, as the late and former Inſtances abundantly teſtifie: And alſo by Floods and Inundations, eſpecially that Univerſal Deluge in the time of *Noah*, which probably did ſweep away as great multitudes of Mankind as are now exiſting upon the Earth, conſidering what a Product might ariſe in the compaſs of 1656 Years, the interval between the Creation and the Flood upon the ſhorteſt Account, though the *Septuagint* render it much longer: and it is not eaſie to judge to what a Sum Mankind might ariſe to in ſuch a Period, conſidering the great longevity of Man's Life in thoſe times; only it is plain that it muſt needs ariſe to a greater proportion than thrice ſo long a Period would yield, when Mens Ages were reduced to leſs than a tenth part of the ſame longevity.

2. It is certain, that were it not for ſuch Reductives as theſe above mentioned, though we ſhould ſuppoſe that the *Capita humani generis* were only *Noah* and his three Sons, and that the Generations of Mankind began ſince the Univerſal Flood, yet the multitudes of Mankind would in this Period ſince the Flood have riſen to ſuch an excreſcence, that according to the ordinary method of Propagation (though the Lives of Men were no longer than now they are) that the Earth would not have been able to have received its Inhabitants.

3. It is alſo therefore evident, that the moſt wiſe and glorious God hath uſed theſe Means above mentioned for moſt wiſe and excellent Ends. For it is the high Prerogative and Advantage of his infinite Wiſdom, to bring about complicated and various excellent Ends in one and the ſame act of the diſpenſation of his Providence, by Plagues, Wars, Earthquakes and Floods (all which are at leaſt permitted if not inflicted, but howſoever moſt wiſely and infallibly governed by him) he puniſheth the Sins and Enormities of Mankind, and reduceth the World to ſuch a due proportion as may be conſiſtent with their convenience and reception in this Earth: And for this cauſe, while the World was but thin and empty of Inhabitants, the Ages of Mankind were longer, and more accommodated to the peopling of the World; and as the World grew by that means fuller, ſo their Lives were ſucceſſively reduced to a ſhorter ſcantlet, till they came to that ordinary Age and time of Life which now they have, and for near 4000 Years have held.

4. Therefore alſo it muſt be granted, that the apparent Multiplication of Mankind upon the face of the Earth ſingly conſidered, is not any Demonſtration or Apodictical Argument againſt the Eternity of Mankind: Since, as it is moſt evident, that there is a moſt wiſe and powerful God, who hath a care of the Inferior World as well as the Superior, and whoſe Providence (notwithſtanding the contrary Sentiments of *Ariſtotle*) reacheth below the Moon, and governs the World with much more Accuracy and Wiſdom than a Gardiner orders his Garden: I ſay, ſince the Regiment of the World, and eſpecially of Mankind, is ſo actually under the Care, Wiſdom, and Power of Almighty God, he that for near 6000 Years by thoſe Methods of his Providence above mentioned hath kept the World of Mankind in a due proportion and equability, which otherwiſe would have grown too great for its reception; could have

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interposed with the like Correctives for twenty thousand Years as well as six, and for a million or other interminate duration for the time past or to come; and so have prevented that enormous excrescence of Mankind, that in an infinite time or duration would have long since surcharged the World; and upon a Supposition of a future Sempiternity would produce the same difficulty, without such interposition of the Divine Wisdom and Providence.

But all this while it must still be remembred, that this Supposition still takes in the Wisdom, Providence and Regiment of the glorious God; for without an intelligent Rector of the World, that *ex intentione* thus orders the Affairs of Mankind, these Reductives either barely, as accidental, or contingent, or periodical and necessary, were not equal nor competent Reductives of the Generations of Men, but would be too much or too little, or unseasonable in time, place, measure, or other Circumstances for such a Business, as shall be shown.

We therefore are not enquiring what the wise and glorious God might or could do in order to the equable Reduction of the World, upon a Supposition of an Eternal Duration; but we are upon a Question of Fact indeed, namely, What he hath done, and whether upon the Supposition of all those Reductives instanced in the former Chapter, at least without the wise and intelligent Regiment of God, they have been, or well could be: considering the nature and course of things of that efficacy to correct the increase and excess of Mankind, that may render it competible with an Eternal Duration.

I therefore shall now come to the things I oppose, and they are these two; *viz.* 1. That these Means considered simply in themselves (without the Conduct and Guidance and Interposition of the mighty God) are in themselves incompetent and unsuitable to the Ends proposed: and 2. That *de facto* they have appeared to be so; and notwithstanding their admission, yet *de facto* the World hath in all Ages increased.

Touching the former of these, the Incompetency of these Expedients to the End proposed (considered singly in themselves) this will best appear by induction of particulars.

For Famines, they are *de facto* incompetent to these Ends: for 1. There was never yet known a Universal Famine, but the defects of one Country supplied by another, as *Canaan* was by *Egypt*. 2. It is ordinarily not sudden but gradual, and foreseen before felt in the extremity, which gives People opportunity of transmigrations. 3. Though the ordinary supplies fail, yet necessity makes Men ingenious and hardy, and if they have but Land-room or Sea-room, they find some supplies for their hunger which they did not before think of or use; though it be otherwise in a close Siege, but that is but a narrow compass, and not of moment to be compared to the multitudes abroad.

2. Plagues are indeed a sharp and speedy Visitation, yet it hath these Allays: 1. Many there are that are able to escape it by Flights, some by Physick, and some by their Age and Complexion. 2. It is not ordinarily of long continuance, the strength of the Disease seldom continuing longer than a Year. 3. Though the Desolation be terrible while it lasts, yet it rarely consumes one half of the Inhabitants. The late Computation of the Number of the Inhabitants, Men, Women and Children in

the City of *London* and the 16 and 10 Out-Pariſhes are eſtimated at 384000, and about ſix Millions in the whole Kingdom of *England*. 2. The greateſt Plagues in our remembrance have not ſwept away above 100000 at moſt in *London* and the Suburbs: Indeed that before mentioned by *Walſingham*, which was in a manner Univerſal, and ſucceſſively in ſeveral places of the World laſted about 15 Years, is ſaid to be ſo great, that ſcarce a tenth part of People ſurvived it; yet if it left a tenth part, ſuppoſe in *England*, it left near a Million of People, which in a little time would and did recover and increaſe conſiderably, as ſhall be ſhewn. 4. Again, ſuppoſe the Devaſtation by Plagues greater than Hiſtory gives us an Account, yet it is for the moſt part a Diſeaſe that reigns in ſome times and ſome places, it may fall in thoſe places where the numbers are already too ſmall, and need an Increaſe. And ſo taken ſingly by it ſelf, is incompetent and unſuitable to the Exceſs, unleſs managed by the wiſe Conduct of Almighty God.

3. Touching Wars and Internecions. It is true, it hath been a great Conſumption of Mankind, but yet it is not an equal Corrective of the Exceſs of Generations: 1. Though ſuch have happened, and frequently, yet they ſeem againſt the nature and diſpoſition of Mankind, ordinarily and in a courſe of Humane Conſtitution: Naturally Mankind is a ſociable Creature, and more than Bees, as the Philoſopher obſerves; and though ſometimes Paſſions, Jealouſies and Politick ends produce Wars, yet naturally Man is not a Creature of prey upon others, as Lions and Tigers are. 2. Ordinarily, though Wars are by one Kingdom or State upon another, yet they preſerve their own Societies with increaſe under Forein Wars; and therefore Civil Wars as they are more deſtructive, ſo they are more rare, becauſe they are more unnatural and deſtructive to that which Men uſually are careful to preſerve, namely, their own Societies. 3. It ſeems an improper and unſuitable Corrective, becauſe Accident and the Wills of Men have ſo great an Influence in the production of Wars; whereby it may fall out that Wars may happen in thoſe Ages, Times or Places, and conſequently, Devaſtations upon them where or when they need not to correct. And though it be true, that a Plethory or Exceſs of Numbers of Men, ſometimes by a kind of Natural or at leaſt Moral Conſequence cauſe Wars, yet we have hardly known any produced ſingly upon that Account; though it hath oftentimes occaſioned Tranſmigrations, deductions of Colonies, and new Plantations; and the World hath been never yet ſo full, but a weaker or oppreſſed Party have found room to retreat from the violence or inſolence of their Oppreſſors.

4. Touching Floods and Conflagrations. It is true that Almighty God as he manageth the forementioned Reductives by his Wiſdom and Providence, ſo he hath done theſe eſpecially in that Univerſal Deluge: But as they are inſtanced in by the Philoſophers as Natural or Periodical Events whereby Mankind is reduced to an equability, we have no reaſon to believe them. Therefore I ſay, 1. That there doth not appear, either in Hiſtory or in the Obſervation of Nature, any ſuch Periodical Floods or Conflagrations; thoſe that we have Relations of happened indeed near together, and in the ſame Country, *viz.* in *Greece*, had they been Periodical or Natural, probably either by a continued Circulation or Rotation, or

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elſe by the interpoſition of ſome reaſonable intervals, the like would have happened before in *Perſia* or ſome Eaſterly parts of *Aſia*, or ſince in *Italy* or *Germany*, or ſome other Weſtern parts of the World, which we have not obſerved to be. And therefore this Suppoſition of the *Hyems magna*, whereby parts of the Earth ſhould be ſucceſſively drowned, ſeems to be only an Imagination, or at leaſt it cannot be known with any tolerable certainty; in as much as the Periods are ſuppoſed to be vaſt, and not happening within any competent time to give us an Obſervation or Proof thereof. And therefore although we yearly ſee a reduction of the numerous increaſe of Inſects, by the Winter Froſt and Storms yearly happening; we have no warrant from thence to imagin that great Winter that muſt make the like reduction of Men and Brutes; for every Year gives us Experience of the one, but never any Age gave us any reaſonable Obſervation, upon which to build an *Hypotheſis* of the like Periodical Revolution of the other: and the ſame I ſay touching Conflagrations. Indeed there have been accidental and particular Inſtances of both, but not any Periodical Return or Revolutions thereof, *quaſi in quodam ambitu & circuitu naturali.* 2. If ſuch were ſuppoſed, yet unleſs they were very ſudden, and very general, they would not be ſufficient to make the Correction: Men would eſcape Floods by running up to Monntains and Hills, and though ſome might periſh through improvidence, or though the ſuddenneſs of a Deluge, many would eſcape. 3. Natural and Periodical Floods or Conflagrations would not be ſutable nor commenſurate to the Increaſe, which depending either upon Accidents or the Wills of Men, would poſſibly be more in one place than in another: The Country of *Paleſtine* would be more peopled than the Sands and Deſarts of *Arabia*, *Egypt* than the Mountains of *Ethiopia*; and fruitful Countries, or Countries open to Trade, and ſafe from Incurſions and Invaſions; more populous than barren Countries, or ſuch as are out of the way of Trade, or ſubject to Inroads: But Natural and Periodical Floods or Conflagrations would probably keep ſome conſtant or ordinary Tract or Courſe, either from Eaſt to Weſt, or from North to South; and poſſibly keeping in ſuch a Climate or Latitude, poſſibly in another; whereby poſſibly theſe Plagues might be more fierce in thoſe places or Continents where the World wants People, and leſs vehement in thoſe places where there needs a Corrective for their exceſs: If theſe ſhould be Univerſal, they would deſtroy the Race of Mankind; if Partial, they would be perchance weak and inſignificant Reductives of the exceſs of Mankind.

When all therefore is done, though it be plain that theſe and the like Calamities are certain Reductives of the exceſs of Mankind, yet they are incompetent of themſelves, and upon a bare Suppoſition of Natural or Accidental Effects. But it is true, as they are either brought and inflicted, or managed and governed by a moſt wiſe and intelligent Being, they are uſeful, and wiſely applied to this End among others.

But in the whole management and conduct of theſe Events and Occurrences whereby Mankind hath been reduced and corrected, we ſhall obſerve very eaſily that Mankind hath ſtill increaſed, and the World grown fuller, even to manifeſt Senſe and Experience, which was the ſecond thing I propoſe to be conſidered.

2. Therefore I do affirm, That notwithſtanding all theſe Ordinary and

and Extraordinary Occurrences that have afflicted Mankind, as ſhortneſs of Life, divers Caſualties and common Diſeaſes, loſs of Men by Navigation, the Intemperance and Luxury of Mankind, the Weakneſſes and deſtructive Sickneſſes incident eſpecially to Infancy, Childhood, and Youth, Abortions voluntary or accidental, and all thoſe ordinary Caſualties incident to our nature. And notwithſtanding alſo thoſe great and vaſt Conſumptions by Famine, by Peſtilence, by ſtrange and Epidemical Diſeaſes, by Wars and Battels, Sea-fights, Internecions, Maſſacres and Perſecutions, Earthquakes, Floods, Inundations, Conflagrations, or what other extraordinary or terrible and univerſal Accidents that have happened to Mankind in any or all the Ages paſt ſince the Flood of *Noah*; Mankind hath notwithſtanding all theſe increaſed and grown fuller, the Generations of Mankind have exceeded their Decays.

And becauſe this is an Aſſertion of Fact, it is impoſſible to be made out but by Inſtances of Fact.

And although it be impoſſible for any Man to give an Account of all the Nations of the World collectively, and ſo to make out the Fact; yet if the Inſtance can be made out in one or two Nations, whereof a true and clear Account may be given, it will be more than a common probability that the ſame may be concluded concerning the generality of Mankind.

And therefore I ſhall ſingle out the Inſtances of two Nations, touching whom the cleareſt Account of their Original and Increaſe may be given, and ſuch alſo as had as great an Experience of the ſevereſt of theſe Correctives, and poſſibly much greater than any determinate People or Nation in the World beſides.

The firſt Inſtance I ſhall give is the Nation of the *Jews*, and I chooſe this People for my Inſtance, 1. Becauſe their firſt Original, and the time wherein it began is moſt clearly, evidently, and unqueſtionably known, and the time wherein it was. 2. Becauſe their ſeveral Increaſes and Abatements and Succeſſions, with the ſeveral times thereof, even down to the laſt Diſſolution of their City under *Titus*, is moſt clearly by a continued Hiſtory plainly and authentically diſcovered. 3. Becauſe by the ſtrange and admirable Providence of God, even ſince the Diſſolution of their State and Republick they have been to this day continued a ſeparated People from the reſt of the World; notwithſtanding their remarkable diſperſion among all Nations, among whom they have yet remained diſtinct as a ſignal Monument of the Divine Truth and Juſtice, and for what other ſecret ends and purpoſes, is beſt known to the Divine Wiſdom. 4. Becauſe this People hath been in all Ages exerciſed with as many Plagues and Slaughters and Devaſtations of all ſorts, as ever any People under Heaven were. And 5. Becauſe the particulars of theſe Devaſtations, and the ſeveral Times and Ages wherein they happened, and oftentimes the Numbers cut off thereby are Recorded by the ſeveral Authentical Hiſtories of that People, which are extant to this day. And 6. Becauſe their Increaſe even at this day, as in their ſeveral antecedent Periods, is ſignal and evident to all the World. So that what is verified touching the Increaſe of that People, may in all congruity of Reaſon be aſſumed and determined much more touching any other People, and all the People in the World: ſince none had ever greater Inſtances

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of Abatements or Correctives of the Exceſs of their Number than this People. Laſtly, Becauſe there can be no pretence that their decays or diminutions by thoſe Occurrences were ſupplied by the acceſſion and conjunction of others of other Nations to them: Since it was their Priviledge in which they gloried, and which they ſtrictly and religiouſly obſerved, To keep themſelves ſeparate and diſtinct from the reſt of Mankind.

I ſhall not be ſcrupulous or curious in the Chronological niceties touching their ſeveral Periods, becauſe in this and other Computations that I have uſed I do not aim at curious or preciſe Computations, but only to ſhew the Order and *Series* of Things for the diſcovery of what I intend; and therefore ſhall take the Account of *Helvicus*, as being plaineſt and readieſt at hand for my purpoſe.

Iſaac and *Rebecca* were the two next immediate Parents of all the Families of *Eſau* and the *Edomites*, and *Jacob* and the *Iſraelites*.

In the Year of the World 2108 were *Jacob* and *Eſau* Born: I ſhall leave the Families of *Eſau*, and carry down that of *Jacob*.

In the Year of the World 2238 *Jacob* goes down into *Egypt*, having then 70 Perſons deſcended from him; which Increaſe was in the compaſs of about 130 Years after the Birth of *Jacob*, and about 70 Years after his Marriage with *Leah*. *Gen.* 46. 27.

The *Iſraelites* increaſe in *Egypt*, yet not without a great deſtruction of them by their ſevere Bondage, and by the Slaughter of their Males. *Exod.* 1.

In the Year of the World 2453 the People of *Iſrael* came out of *Egypt*, which was about 215 Years after the going down of *Jacob* to *Egypt*.

In a ſhort time after the Migration of the *Iſraelites* out of *Egypt* they were numbred, and the Number of their Males that were above 20 Years old then amounted to Six hundred and three thouſand, five hundred and fifty, beſides the *Levites*; from a Month old amounting to 22000. *Numb.* 1. 46. and 2. 32. and 3. 39. and if we ſhould take into the number of the Eleven Tribes Women, and Children under 20 Years old, we ſhould reaſonably have more than triple the number, *viz.* above two Millions.

From this time to the time of *Phinehas* we have no certain eſtimate of their Numbers, yet in this Interval they had very great Abatements and Diminutions, as will appear by theſe Inſtances.

That all this number of People above 20 Years old, except *Joſhua* and *Caleb*, died in the compaſs of their 40 Years wandering in the Wilderneſs, *Num.* 26. 65. yet ſome of them could not exceed 60 Years of age.

Of the Plague 34000 in the Wilderneſs, beſides the Complices of *Corah*: *Numb.* 16. 49. and 25. 49. beſides thoſe that died of Fiery Serpents. *Numb.* 21.

After the death of all that were before numbred, they were again numbred all except the *Levites*; and the Number of all the Males from 20 Years old and upwards, were Six hundred and one thouſand, ſeven hundred and thirty: among theſe was the Land after divided by *Joſhua*. *Numb.* 26. 51, 53.

I do not remember any Numeration of the People from this time till the time of King *David*, and in that Interval that People ſuffered very great detriments.

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1. By the Wars with the *Canaanites* under *Joshua*, wherein though they were victorious, yet it could not be without great loss of Men.

2. After this they endured in the time of the Judges great diminutions under the Kings of *Mesopotamia*, *Canaan*, the *Midianites*, the *Philistims*, the *Ammonites*, besides about 65000 Men slain in the Civil Wars with the *Benjamites*.

3. The Wars in the time of *Saul*, wherein though he was often victorious, yet at last he suffered a great Slaughter by the *Philistims*.

4. The Wars of *David*, both with Foreiners and the Rebellious in his own Kingdom; wherein though he were victorious, yet those Victories could not be obtained without great Losses: In the Business of *Absalom* 40000 of the *Israelites* slain and lost in one Battel, 2 *Sam.* 18. 7. in the latter end of the Reign of *David*, about the Year of the World 2925, which was 435 Years after the Numbring of the People by *Moses* and *Eleazar*, *David* again Numbers the People, and then the Account of the People of *Israel* was 800000 valiant Men that drew the Sword, and of *Judah* 500000 valiant Men, 2 *Sam.* 24. 9. in all 1300000 fighting Men: and if we should take in Women, Children, and Aged, it is probable they were above five Millions.

So that in the space of 435 Years, notwithstanding all these Decrements they were increased about three Millions.

The next Account of the Numbers of the Tribes of *Judah* and *Benjamin* only under *Jehosaphat*, 2 *Chron.* 17. 14. and though in the interval between *David* and *Jehosaphat* these two Tribes received considerable Allays by Wars, Plagues, and Famines, yet the Number of the mighty Men of valour of *Benjamin* was 380000, and of the Tribe of *Judah* 780000 mighty Men of valour. The Increase of *Judah* between that and *David*'s Numeration was 280000 fighting Men; and therefore the Increase of Women, Children, and Aged not fit for War, must needs be much greater and more considerable; and yet this was in a Period only of those Years that intervened between *David* and *Jehosaphat*.

After this the ten Tribes were carried away Captives by *Salmanasser*, 2 *Kings* 17. and only *Judah* and *Benjamin* remained: so that now all our Account must run upon these two Tribes, the rest being carried away, and probably confounded and mingled among the Gentiles. And if we consider what Calamities these two Tribes endured by Wars and Captivities from the time of *Hezekiah* until their deportation into *Babylon*, we may reasonably suppose that they had as great a Reduction as ordinarily could befall a People: *Manasseh* carried Captive to *Babylon*, which probably was the issue of some great Siege or Battel; *Josiah* slain in Battel by *Pharaoh* King of *Egypt*; *Jerusalem* taken by *Nebuchadnezzar* in the 8th Year of *Jehojachim*, 2 *Kings* 24. 12. again in the 9th Year of *Zedekiah* the City again besieged, and after two Years Siege and great Famine and Slaughter, taken. *Jer.* 39. 12.

These severe Administrations of War could not be without great Desolations, Slaughters and Mortalities, though their Number is not recorded.

The People were carried away Captive to *Babylon* in the Year of the World 3362 or thereabouts, which was about 437 Years after the Reign of *David*; seventy Years after the Captivity, *viz.* about the Year of the

the World 3420, there was a Return of the *Jews* under *Cyrus*, which continued in Partial Remigrations for some time after.

The numbers of those that returned first with *Ezra* were 42360, *Ezra* 2. 64. this seems to be the greatest number: there were other Remigrations in the time of *Darius* and *Artaxerxes*, both in the 27th Year, though the certain number be not mentioned. We will therefore take scope enough, and suppose them in all 100000 Persons, which is more than double to those that came up with *Ezra*.

These continued in a troubled condition from the time of the cessation of the *Persian* Monarchy until the time of Christ, and rarely without Wars, as the History of the *Maccabees* gives us an account; especially under *Antiochus Epiphanes*, who made great slaughter of them.

After that, *Pompey* by Arms took *Jerusalem* and subdued *Syria* in general, not without great bloodshed; and as they were naturally an unquiet People, so the Histories tell us that the *Romans* and their Governours exercised great severity and bloodshed among them.

And yet for all these Correctives and Decrements of this unquiet People, *Josephus* tells us, that *Nero* willing to take some Account and Estimate of them by their great convention and concourse in their *Paschal* Solemnity, found their number to be Seven and twenty hundred thousand Persons, *Joseph. de Bello Judaico, l. 7. pag. 968.* where Strangers might not be mingled with them in that Solemnity.

The Destruction of *Jerusalem* under *Titus* and *Vespasian* is supposed to be under the 66th Year after the Birth of Christ, about the Year of the World 4006 which was about 586 Years after the Return under *Cyrus*: *Josephus* gives us an Account of those that were slain at the Siege of *Jerusalem*, *viz.* 110000, and Prisoners taken 90000, *Joseph. lib. 7. cap. penult.* besides the multitudes slain in *Cyrene*, *Alexandria*, and other places not easie to be remembred.

By which we may reasonably conclude, That in the Period of about 600 Years this Nation of the *Jews* increased to 27 times more than when they returned under *Cyrus*; for then we allow the number of them that returned to be 100000, but now they were increased to 2700000.

It is true, some of the *Jews* escaped this Slaughter and Captivity, suppose we the number of those that escaped were a Million of *Jews*, such I mean as held rigorously to their *Jewish* Law; for many became Christians, and left much of the *Jewish* strictness, and possibly mingled with other Nations.

But if we should now examin the multitude of the *Jews* in *Europe*, *Asia* and *Africa*, we shall find vast numbers of them in all the Trading Cities and Countries except *England*, *France*, *Spain*, *Portugal*, *Naples* and *Sicily*, from whence they were formerly banished; yet even in those Countries from whence they have been banished, they are in great numbers, but yet under the disguise of other Names and Nations: But if all the *Jews* (I mean those descended from the *Reduces captivitatis Babylonicæ*) which are in *Germany*, *Bohemia*, *Poland*, *Lituania*, *Russia*, *Venice*, *Rome* and other parts of *Italy*; in the Dominions of the *Turks*, *Persia*, *Arabia*, *India*, *Africa*, at *Alexandria* and other parts of *Egypt*, were collected into one Body, they would exceed in number any one of the greatest Nations of the World, and yield an irresistible Army, if they had Weapons and

Courage in any measure proportionable to their Wealth, Craft, Subtilty, and Numbers.

So that notwithstanding all the Abatements and Decrements they have had by Wars, Oppressions and Internecions, Plagues, Famines, and other Calamities, we find the Product of one Nation derived from only two Persons, *Isaac* and *Rebecca*, in the compass of about 5000 Years swoln into incredible numbers of Millions of Persons now existing, and known to be of that Linage and Descent, and still continuing unquestionably in that Distinction, besides those multitudes derived from the Line of *Esau*, and the ten Tribes, which are as it were lost and confounded, without any distinction among other Nations. And thus far of the first Instance, concerning the Multiplication of the Nation of the *Jews*.

The next Instance that I shall give shall be nearer home; the Kingdom of *England*: I shall not give any Instanee touching it before the Conquest, because those times are dark, and besides, the Vicissitudes and Successions of various Nations in this Kingdom renders the discovery of the Progress of Generations of Men, or the Increases thereof, difficult; as *Britons*, *Romans*, *Picts*, *Saxons*, and *Danes*.

The ancient Inhabitants were the *Britons*, the Body of which People hath been in a great measure shut up and contained within the Country of *Wales*; but what by the transplanting of many of the *Welsh* into *England*, and by transplanting of the *English* into *Wales*, it is not possible to say that all the *Britons* are confined to the Country of *Wales*, or that none but *Britons* are there: and therefore there can be no particular or evident Conclusion made touching their Increase or Multiplication. But I shall take a shorter Period or Compass of Time, namely, the last 600 Years or thereabouts since the *Norman* Conquest.

And although it may be true, that many Persons of Forein Countries have come into *England* and planted themselves here, so that the whole Increase of this Kingdom cannot be singly attributed to those that were either Natives, or such as came in with the Conquerour, but many *Scotch*, *Irish*, *Dutch*, but especially *French*, either by Naturalizations or Transmigrations have increased the Inhabitants of this Island; yet considering that probably the Migrations of the *English* into *Scotland*, *Holland*, *France* and other Countries, have made amends for their Migrations hither: We may make a reasonable Conjecture, that the Descendents from those that inhabited this Kingdom in the time of the Conquerour, have increased exceedingly above what they were in that time.

And the Evidence thereof is this: King *William* the First, after his Victory over *Herald*, did in the 16th Year of his Reign over *England* cause a Survey to be made of all the Cities, Towns, Mannors and inhabited Lands in *England*, *Northumberland*, *Cumberland*, *Durham* and *North-wales*.

This Survey was finished in the 20th Year of his Reign, and the Book it self preserved to this Day among the Records of the *Exchequer*, not only a Transcript or Copy, but the very Original Book it self, and is called *Doomsday*: In this Book are entred the Names of the Mannors or inhabited Townships, Boroughs and Cities, and the Owner of them, the Number of Plough-Lands that each contains, and the Number of the Inhabitants upon them, under the several Names appropriate to those

Places:

Places: As for Inſtance, *Ibi* 12 *Burgenſes*, 5 *Villani*, 5 *Bordarii*, 5 *Nativi*, 5 *Radiminches*, 5 *Cotterelli*; and the like, according to the quality or condition of the Inhabitants: So that this Book in effect gives an Account not only of the Manurable Lands in every Mannor, Town, or Vill, but alſo of the Number and Natures of their ſeveral Inhabitants.

To make a Calculation of the Number of Plough-Lands and Inhabitants through all *England*, as they are recorded, and to make therewith a Compariſon unto the preſent State and Number of Inhabitants at this Day throughout *England*, is a laborious piece of work, but it is not difficult to be done in any one County; I have tryed the Compariſon in the County of *Glouceſter* through ſome great Boroughs, as *Glouceſter* it ſelf, *Thornbury*, *Tetbury* and other places, and in effect through the whole County; and I do find,

1. That there are very many more Vills and Hamlets now than there were then, and very few Villages, Towns or Pariſhes then, which continue not to this Day; but now there are as many as then, and many more. The 5th of *March*, 9 *E.* 2. there iſſued Writs to the Sheriffs of the ſeveral Counties, to return the Names of the ſeveral Vills and Land-Owners in their ſeveral Bayliwicks, which was accordingly done, and remains of Record in the *Exchequer* under the ſtile of *Nomina Villarum*; and the Sum of the Vills of *Glouceſterſhire*, together with the five Boroughs of *Glouceſter*, *Briſtol*, *Berkley*, *Durſly*, and *Newenham* amounted to 234, which I take it are more than are in *Doomſday*, and yet not ſo many as are at this day; and thoſe that continue to this day, are far more populous than they were at the taking of either of thoſe Surveys.

2. That there is much more Tillage, and more Plough-Lands now than there were then; which happens by the reduction of many great Waſts and Commons into Tillage, or Meadow, or Paſture, which then were only Waſts, and therefore not particularly ſurveyed becauſe of no conſiderable Value, and not taken notice of in that Survey.

3. That the number of Inhabitants now are above twenty times more than they were at that time, as well in particular Towns, Boroughs, and Mannors, as in the general extent of the County; and yet that Survey, even as to the number and quality of thoſe that reſided in thoſe Towns or Mannors, at leaſt as Houſholders, is very preciſe and particular: I have not yet made an exact particular Calculation of the Number recorded in that Book through the whole County, but I will give a few Inſtances of particular Towns, which may give an eſtimate touching the whole.

Glouceſter is now a very great and populous City, formerly before the time of *H.* 8. a Borough: In the Survey of *Doomſday* it is ſurveyed diſtinct from the *Bertun* of *Glouc'*: the groſs of the Borough is ſurveyed together in the beginning of the County, but there are ſome other particular Burgages thereof mentioned under the Titles of particular Mens Poſſeſſions; as, *Terra Rogeri de Lacy*, *Terra Elnuffi de Heſding*, *&c.* The whole concretion of the City of *Glouceſter* conſiſts partly of what was the ancient Borough, partly of acceſſions from the Mannors or Villages adjacent, as *Barton* and ſome others: I ſhall therefore caſt up the whole Number of all that were in *Glouc'* or *Barton*.

In the Survey of *Glouceſter* there are reckoned 23 Burgages and Houſes; 16 that were demoliſhed for the building of the Caſtle, 14 that were waſted, and ſome that belonged to *Osbertus Epiſcopus*, not numbred, but yielded the yearly Rent of 10 Shillings; which according to the uſual rate of the Houſes in *Glouceſter* at that time, which was at 5^{d} or 6^{d} a Houſe, might produce 20 Houſes, *in toto*,

73.

Beſides theſe, there are ſurveyed under the Titles of ſeveral Owners of Lands *ſparsim* through the Book, as under the Title *Terra S. Dionyſii*, *Eccleſia S. Martini*, and others, according to my beſt Computation and Obſervation,

82.

Beſides theſe under the Title of the Poſſeſſions of St *Peter* of *Glouc'*, there are reckoned up as many *Burgenſes* as yielded the Abbot anciently the Rent of 19^{s} and 5^{d}, and 16 Salmons; but at that time 16 Salmons and 50^{s} Rent, without any certain number of Burgeſſes; but if we allow 6^{d} for a Burgeſs, we may ſuppoſe them to

100.

The Total 255.

The Mannor of *Barton*, or the *Barton* of *Glouc'*, ſome part whereof hath been taken into the Suburbs of *Glouc'*, was of two Owners; part was the King's Lands, part belonged to the Abbey of St *Peters*, but the whole number of the Houſholders inhabiting the whole *Barton*, with its members, *Tuffly*, *Barnwood*, *&c.* were as followeth,

Villani	56
Bordarii	39
Servi	19
Molini	04
Liberi homines	10
In toto	128

And the Total of the whole Account of the City of *Glouc'*, the *Barton* with its members; *Brewere*, *Upton*, *Merwin*, *Barnwood*, *Tuffly*, *Norwent*, amounted then only to

383.

And the ſingle City of *Glouceſter* within the Walls contains at this day near 1000 Houſes and Houſholds.

Again, the Borough and Mannor of *Barclay*, with the members thereof enumerated in *Doomſday*, viz. *Alkington*, *Hinton*, *Cam*, *Goſington*, *Derſilege*, *Cowly*, *Ewly*, *Nimsfield*, *Wotton*, *Simondſhall*, *Kingſcote*, *Beverſcote*, *Oſelword*, *Almondsbury*, part of *Cromhall*, *Harefell*, *Weſton*, *Elberton*, *Cromale*, *Erlingham*, *Eſtelword* are ſurveyed to contain in the whole to 590 Families, whereas at this time there are near 5000 Families in this Precinct; the Pariſh of *Wotton* yielding upon the point of 2000 Comunicants, and that of *Derſilege* above 500 at this day.

Again, *Tetbury* and the Hamlet of *Upton* belonging to it, the Survey of *Doomſday* gives us an Account of about 73 Families of all kinds belonging to it: But now I believe there are little leſs than 1500 Communicants in that Pariſh.

Sodbury:

Sodbury: the Survey gives us an Account of about 46 Families of all sorts; they are now near twenty times so many.

Thornbury, with the Hamlets thereunto belonging: the Account of *Doomsday* is of 105 Families of all sorts; there is now near six times so many.

Aderly, a little Village at the time of making of that Survey, consisting not of above 17 Families of all sorts; now above twice as many.

The like Instances might be produced, with the like evidence of very great Increases in the Towns of *Cirencester*, *Minchin*, *Hampton*, *Tewxbury*, *Campden*, *Winchcomb*, *Avening*, *Westbury* near *Bristol*, and generally through the whole County of *Gloucester*; which I do not without just reason suppose hath more than twenty times the Inhabitants which it had at the time of the coming in of *William* the First, which is not now above 604 Years since.

And if we should institute a later Comparison, *viz.* between the present time and the beginning of Queen *Elizabeth*, which is not above 112 Years since, and compare the numbers of Trained Souldiers then and now, the number of Subsidy-men then and now, they will easily give us an Account of a very great Increase and Multiplication of People within this Kingdom, even to admiration.

And let any man but consider the Increase of *London* within the compass of 40 or 50 Years, we shall according to the Observations framed to my hands find, That the In-Parishes until the late Fire in that time have increased from 9 to 10, or a 10th part; and that the 16 Out-Parishes have in that time increased from 7 to 12, and yet without any decrement or decay of the rest of the Kingdom.

By which, and infinite undeniable Instances that might be given, it is apparent, that within the compass of the last 600 Years this Kingdom hath increased mightily in its number of Native Inhabitants.

And yet it is most apparent, that it hath had as great Allays and Abatements of the Multiplication of Mankind in it, as any Kingdom in the World. For Instance,

1. In respect of the nature of its Situation, which is all Maritim, and consists much in Navigation, which exhausts abundance of People by Diseases and Casualties at Sea.

2. It hath been as often visited with sore Pestilences, Epidemical Diseases, and Mortality by reason thereof, as any Country: the experience of the last 60 Years gives us abundance of Instances thereof, and former Ages were as frequently visited in this kind as later.

3. Forein Wars, both at Sea and Land, have devoured great multitudes of our Inhabitants; as those formerly with *Scotland*, *France*, *Spain*; and lately with the *Netherlands* and *French*.

4. No Kingdom in *Europe* hath had greater Experience of Civil Wars, nor greater Consumption of Men thereby, than *England* hath had since the time of *William* the First: For not to instance in our Wars with the *Welsh* and *Irish*, let any man read but the Histories of the Wars here in *England* between King *Stephen*, and *H.* 1. and his Mother, King *John* and his Nobles, King *H.* 3. and the Nobility; between King *E.* 2. and the Earls of *Lancaster* and *Mortimer*; the Wars between the two Houses of *York* and *Lancaster*, and their Partizans, from the time of *H.* 4. unto the begin-

beginning of *H.* 7. in one Battel between *H.* 6. and *E.* 4. killed of one side 30000; the Rebellions in the times of *H.* 7. and others the Kings and Queens that succeeded him, and the loss of many lives that happened by the suppression thereof; the late cruel Wars within these 30 Years last past in *England*; there cannot be Instances given in any one Kingdom of greater Abatements of the Increase, by Wars and Internecions, than may be given in *England*.

5. Let us also consider the vast Evacuations of Men that *England* hath had by Forein Assistances lent to Forein Kingdoms and States, by Volunteers and Auxiliaries; as, to *Scotland* in the late Queens time, to *France*, to the *Netherlands*, to *Germany*.

6. To these also add the vast numbers of Men that have transplanted themselves not only into *France*, *Holland*, and our neighbour Nations, but also to *Virginia*, *Maryland*, *New England*, *Barbadoes*, *Bermudas*, to *Amboyna* and other places in the *East India*, and lastly, into *Jamaica*; we shall find upon these and other Accounts, that *England* hath had as great Correctives of the Excesses of their Generations within these last 600 Years, as any Peoplein the World.

Add to these the great Famines and Pestilences which have happened within the compass of 600 Years, recorded in History, and obvious to our own Experience.

And therefore, if notwithstanding all these Correctives the number of Men have continually increased, and that in so vast and observable a degree above their decrease; we have as much reason to conclude a parity in the rest of Mankind: and possibly were we as well acquainted with the Concerns of other Kingdoms or States, especially of the *Netherlands* and *France*, the Instances of this Increase would be as much, and possibly more conspicuous than among us.

Upon the whole matter therefore I conclude, That as the Correctives instanced in the last Chapter are not in themselves likely to be sufficient and sutable to the Reduction of the Increase of Mankind to an Equability, especially in an infinite succession of Eternal Generations: So by plain Experience it is apparent and sensible, that *de facto* they have not done it in a finite limit of Ages; but Mankind have notwithstanding them increased every Age, and the multitude of them that are born and live, over-ballance the number of them that dye, *communibus annis*; or being taken upon a *medium*, though possibly some one Year gave the advantage of Number to the Descendents, yet it is not common nor ordinary, but more than two or three Years for one give the advantage of Number to them that are born and live.

CAP. XI.

The Consequence and Illation upon the Premisses, against the Eternity of Mankind.

THe great Assertors of the Eternity of the World and of Mankind, have certainly gathered their Opinion principally from this, That they find that Mankind is propagated by ordinary course of Generation, and

and this they ſee by Experience: And as they do ſo now, ſo they did a hundred or a thouſand Years ſince, and as far as thoſe Hiſtories they credit give them account, it was ſo in thoſe times, and in the times before them, as far as Tradition could inſtruct them. And although thoſe various Occurrences of Wars, Peſtilences, Migrations, Floods, Changes of Religion and Languages have obſcured the Hiſtories, Relations and Traditions of former times before thoſe Hiſtories that are extant; yet they think it becomes them, as reaſonable Men, to believe that things have been always ſo as now they are; and that it were a fondneſs to ſuppoſe or believe things to be otherwiſe than they have appeared in the tract of all Times or Ages.

And upon the ſame ground that theſe Men aſſert the Eternity of the World, the Inſtance and Argument now produced of the plain and experienced Increaſe of the numbers of Men upon the face of the Earth, ſeems much more forcibly to conclude againſt that ſuppoſed Eternity of Mankind. For it is plain and evident to Senſe, that the World grows every day fuller than formerly, notwithſtanding all thoſe Correctives and Reductives thereof: And we have reaſon to think it is ſo in all places, at leaſt one with another, and in all Ages, and among all People as we find it in *England* for theſe 600 Years, or among the People of the *Jews* for above 2000 Years: For among theſe People, and in theſe Periods of Time there have been as many and as great Diminutions and Abatements as ever were in ſuch Periods of Time: and yet though perchance in one Age they have diminiſhed, yet they have not been ſo diminiſhed, but that in the compaſs of four or five hundred Years their Increaſe above what they were before ſuch Diminution, is upon a *medium* always exceeding their Decay.

And ſince we have reaſon to believe what we ſee, namely, the Exceſs of Generations above their Decays, we have reaſon to believe it was ſo always; and if it were ſo always, it is not poſſible the Generations of Mankind could be eternal.

For if we ſhould ſuppoſe the Eternity of the World, an Increaſe of but one Man in the Period of Millions of Years would have filled more ſpace than all the Earth or the Concave of Heaven could receive: For in as much as in a Duration that never had a Beginning there muſt needs be infinite Millions of Years, the Increaſe of one Man in every Million above what was before, muſt needs produce an infinite coexiſting number, and an infinite *moles* of Mankind; much more if the Increaſe were in any meaſure proportionable to what our daily Experiences give us Inſtances of. Whereby we find, that although it be poſſible that ſeveral Families may be wholly extinct in a Kingdom in the Period of 5 or 600 Years, and though poſſibly in ſome one Age there may be a diminution of the People of a Kingdom from what they were in the Age before; yet in the ſucceſſion of a very few Ages they again increaſe beyond the diminution, and neither ſucceſſively decreaſe, nor hold an equality; which we may reaſonably ſuppoſe to be the common condition of the World.

And as to that Suppoſition, That even upon a Natural account, when the World grows too full of Inhabitants, they muſt break the Bonds of Society and Peace, and ſo diminiſh each other by Internecions and Wars.

Wars. As Air compreſſed, or expanded beyond the meaſure of the Veſſel containing it, breaks the Veſſel wherein it is compreſſed to give it ſelf room. I ſhall only ſay, that although the Pride and Ambition and Inſolence of neighbouring Princes or People, or the ſenſe of too much Oppreſſion and Hardſhip hath many times raiſed Wars, yet we never knew Wars to grow meerly upon the account of the Fulneſs of any Country: indeed that Plethory hath many times occaſioned Emigrations, and Tranſplantations, and Navigation, and increaſe of Trade or Manufactures and other induſtrious Employments; but Wars have always grown upon other Occaſions: though, as I before obſerve, the great, wiſe, and intellectual Governour of the World hath by his over-ruling Conduct of the Paſſions of Men, brought about ends for the convenience and benefit of Mankind in this reſpect alſo, as well as to puniſh their Exceſſes and Enormities.

CAP. XII.

The Eighth Evidence of Fact proving the Origination of Mankind, namely, the Conſent of Mankind.

I Come now to the Eighth and laſt Evidence of Fact, proving the Origination of Mankind, namely, The general Conſent of Mankind in that Perſwaſion; wherein I ſhall purſue this Order:

Firſt, to conſider the more Popular or Vulgar Opinion of Nations in all or moſt Places and Ages of the World, agreeing in this Sentiment or Perſwaſion, and what may be reaſonably concluded of the truth, or at leaſt great probability of the truth of that Suppoſition of the Origination of Mankind, upon the Suppoſition of ſuch a Conſent. Secondly, to conſider the more reſtrained Perſwaſion of the Learned and more conſiderate ſort of Men, that guided themſelves in their Sentiments not barely upon Popular or Vulgar Opinions, but ſearched deeper into the Reaſons and Evidences of things; namely, the learneder Tribe of Men, Phyſiologiſts and Philoſophers: And then I ſhall alſo conſider the ſeveral Suppoſitions of thoſe that agreed in that Perſwaſion touching the ſeveral Manners and Methods of ſuch Originations, and wherein their ſeveral Suppoſitions ſeem to be deficient, inſufficient, or untrue.

Firſt, touching the National or Popular Opinions touching the Origination of Mankind.

There hath prevailed among the generality of Mankind a common Perſwaſion, that Mankind had an Original *ex non genitis*; and thoſe Nations that pretend to the greateſt Antiquity, ſuppoſe themſelves to be *Terrigenæ*, or at leaſt by ſome other Method than the ordinary courſe of Generation.

Kircherus in his *Oedipus Ægyptiacus*, *Syntagm.* 3. *Cap.* 1. out of *Maimonides* gives us an Account of the *Zabei*, deſcended from *Cuſh*, and inhabiting the Coaſt of the *Red Sea*; that though they held the World eternal, yet ſuppoſed the firſt Man *Adam* to be begotten in the Moon, of a Father

and

and Mother, and from thence he came into this lower World, and was called *Apostolus Lunæ*, and taught Men to worship the Moon: and for this he cites *Maimonides*, *l.* 3. *cap.* 29. though the late Translation mention nothing of his proceeding from the Moon, but of his coming out of *India* into *Babel*, and teaching Men the Worship of the Moon: this Fable the *Rabbi* confutes. *Diodorus Siculus* gives us an Account of the Opinion of the *Egyptians*, *lib.* 1. *cap.* 2. who though they pretend a vast number of Years to have passed since the Origination of Mankind, yet they suppose it had an Original; *Et ab orbis initio primos homines apud se creatos*: and they inferr it from the Fertility of their Soil by the Inundation of *Nilus*, which at its recess leaves so fruitful a Tincture, that thereby and by the heat of the Sun, Animals have their visible production, part after part: And yet both *Aristotle*, *l.* 2. *Meteoron.* and *Herodotus* in *Euterpe* do with great probability evince that the fruitfullest part of *Egypt*, namely, the part called *Delta* where the *Nile* overflows, is an Exaggeration, or Ground gained by the Inundation of *Nilus*.

Herodotus, *ubi supra*, tells us, That in the time of *Psamniticus* sometimes King of *Egypt* there was a Competition between the *Egyptians* and *Phrygians*, who were the first People, or the *Terrigenæ*, and that by the Experiment of the Education of two Infants which should not be instructed, by their Natural Speech in the Language of *Phrygia*; the *Phrygians* carried the priority. The thing is fabulous, all the use that is to be made of it is, That there was a common Opinion in the Nations of the World, that there was some Inception of Mankind otherwise than by the way of Natural Procreation.

Laertius, *in Proœmio*, supposeth the *Grecians* to be the first Men, *A quibus nedum Philosophorum, sed hominum genus initium habuit.*

The above named *Diodorus Siculus*, *lib.* 4. *cap.* 1. tells us that the *Ethiopians* claim a greater Antiquity than the *Egyptians*, who borrowed many of their Laws and Customs and Religion from them: that as *Ethiopia* was the fittest and most congruous place for the first Production of Men and Beasts, in respect of the vicinity and constancy of the Sun; so, *de facto* the *Ethiopians* were the first Men that were on the Earth, and *Terrigenæ*. *Ferunt, Æthiopes primos hominum omnium creatos esse; cujus rei conjecturam ferunt, quod non aliunde homines in eam accesserunt, sed in ipsa geniti meritò Indigetes omnium consensu appellentur. Et quidem verisimile est eos qui sub meridie habitant primos è terra fuisse homines genitos; nam Solis ardore terram quæ humida erat arefaciente, atque omnibus vitam dante, decens fuit locum Soli propinquiorem primò naturam animantium tulisse.*

De Laet in his History of the Original of the *Americans*, *pag.* 178. tells us of the Perswasion of divers of the *Americans*, that held there is one God; *Qui omnia creavit, dein plures in terram defixerat sagittas, è quibus hominum genus ortum & propagatum fuit*: though they also held other inferior Deities: And *Pag.* 106. *Alii narrant, è quadam specu per fenestram exiliisse sex aut nescio quot homines, eósque initium dedisse humano generi in loco qui ob eam causam dicitur* Pacari tampo; *atque ideo opinantur* Tambes *esse hominum antiquissimos. Vide Acost. l.* 1. *cap.* 25. *ad idem.*

Thus it seems there hath been in all Nations, that have had any manner of Order among them, a common Opinion of the Origination of Mankind; though they have dressed up the Supposition with various Fictions

and Imaginations no less vain than the Poets, who supposed Men to grow of the Serpents Teeth sown by *Cadmus*, or the Stones thrown over their Heads by *Deucalion* and *Pyrrha*.

This perswasion and opinion of Mankind of their Original, might be conveyed to the generality of Nations by some of these ways:

1. By some Tradition, derived down unto them from those that lived before them; but then if we look after the original or first head of this Tradition, it may be hard positively to define from whence it began; but it seems probable, that it was from those first Parents of Mankind, and so the Tradition founded in the Truth of the Fact, and originally delivered by them that perfectly knew it to be so: It is true, there are, and have been very many things entertained as true by Traditional Derivation, which either have not any sufficient evidence of their Truth, or it may be some things that do oppose the credit of it; and it were a piece of vain credulity to believe every thing, that either vulgar Tradition, or the Artifices of Men, have imposed upon over credulous succeeding Ages and Persons: And we see, that as the Origination of Man hath been traditionally received, so those Adjuncts and Fables with which it hath been dressed up, have been also received and believed with it. But to this I say:

1. That the Origination of Man, as a Matter of Fact, could hardly be thought of, but either by very considering and thinking Men, whereof hereafter; or by such, as being the first Parents of Mankind, knew their Original. And if it be said, they could no more know their Original than a Child new born: It is true, if the Production of Mankind were such at first as it is now, or as some of the mistaken Heathen thought it, (*viz. in Infantia*) it may be so: But we shall see, that if Mankind had their Original *ex non genitis*, (as most certainly they had) then the Formation of Mankind was in his full and perfect Constitution, and not by a gradual progress from Infancy as now.

2. That the Tradition of the Origination of Mankind seems to be universal, but the particular Modes or Methods of that Origination, excogitated by the Heathen, were particular, and not common; and therefore, though these be fabulous and deserve not our credit, yet they do not abate the credibility of the universal Tradition. The common Tradition and consent thereunto of the Existence of a Deity, carries in it a great moral Evidence of the Truth thereof, although the particular superadditions and multiplications of Deities, by the Fancies and Traditions of particular Ages or Nations, are fabulous and untrue: *Quod ab omnibus ubique & semper creditum est pro veritate habendum est*, though the various particular Modes, and Methods, and *Hypotheses*, are or may be fabulous.

3. That Mankind had an Original might be known naturally, and without a Revelation to the first Individuals of Humane Nature, and consequently might with evidence and certainty enough, even upon a moral account, be communicated by them to others, and so pass into an universal Tradition: But the Manner of the first Production of Men, what gradations were antecedent to it could not possibly be known to the first Parents of Mankind without Divine Revelation, because it must needs be antecedent to their Being, and therefore the particular Manner thereof

thereof could not, upon a bare natural or moral account, be any true Root or Foundation of such a Tradition, as according to the *Mosaical Hypothesis* of the Origination of Mankind, whereby we understand that *Adam* was created out of the Dust of the Ground, and then had an Intellectual Soul put into him; *Adam* might upon a natural account know that now he was, and that before he was not; and he might upon a rational account know, that such a Production of such a Being as he found himself to be, could never have been effected without the agency of a most powerful and wise Being, which we call Almighty God: And this Tradition, both that he was made when before he was not, and that he was created or made by Almighty God, he might with as great evidence and certainty traditionally communicate to his Descendents, as any other matter of fact, or rational deduction: But he could never know the manner of his own Production, or the particular Preparations antecedent to such his Being, without Revelation from God, or some intelligent Being that saw or knew the antecedents to his Constitution; neither could he without such Revelation or Discovery, deliver the same over traditionally with any certainty of truth to his Descendents. And consequently, the general Tradition of his Origination hath a Root of Credibility in it, to such a Man as will believe that any matter of Fact may be true that he sees not; though the particular manner of his Origination is not with any certainty credible to him, that either believes not there is any Divine Revelation, or that believes not the particular Method propounded is in truth a Divine Revelation.

So that the general Tradition that Man had his Origination *ex non genitis*, is a greater Evidence that it was true, than that he was made out of Arrows stuck in the Ground; or, *ex folliculis terræ innascentibus*, as some Philosophers.

2. The Ground of this Perswasion hath sprung from such of the Philosophers, and other considerate Men, who upon a strict Enquiry and Examination have found it impossible that the successive Generations of Mankind could be Eternal, and consequently Infinite; and therefore have concluded with very great evidence of Reason, that it must needs have some other Origination in some one Period of duration, than what is now natural and common. But then being destitute of Divine Revelation, or at least not giving due credit thereunto, and being greatly in the dark, and not knowing well how to determin what that Method of the Origination of Mankind should be, some took up one Fancy, some another, to salve the *Phænomenon*, according as their Imaginations led them. And hence it was, that some thought their Origination was not altogether unlike the spontaneous Production of Insects; only these being Annual, required no great contribution of Heavenly Influxes; but that of the Production of Men or more perfect Animals, *Non sine magna cœlestium corporum conjunctione sive mutatione*: Others again, more soberly attributed it meerly to the Power and Wisdom of the glorious God: Others, to the efficiency of Angels; whereof in the next Chapter.

And this Contemplation of such Philosophers and knowing Men coming abroad into the World, the generality of Mankind subscribed to the truth of the grand *Hypothesis* it self; namely, That Mankind had at one time or other, or by some means or other an Origination differing

from the ordinary and natural method of Propagation now observed: And finding that the same held a singular congruity to the nature of things, and the general Conception and Reason of the Humane Understanding; the generality of the World entertained, and by Tradition transmitted this *Hypothesis* to their Posterity.

But finding the Philosophers and Wise Men so uncertain and disagreeing, *de modo*, and unable to give any satisfactory Resolution thereof; every Nation, and almost every Person took up what particular *Hypothesis* pleased them for the Method or Manner of such Origination; and herein the Wantonness of Poets, and the Crafts of their Heathenish Priests and Hierophants abundantly gratified the Fancies of the People with Superstructions and Inventions of their own.

And indeed it is observable, that all those ancient Traditions of things that were truly done, and so delivered over and received by Mankind, as they have for the substance and main of them been preserved by the strength of this Tradition; so where the Holy Scriptures have not been taught or known, these Traditions have been admirably dressed by Sophistications and Superadditions, introduced by the Phantasies of Poets or the deceits of Heathenish Priests, or by the gradual corruptings of the Traditions themselves. Thus the History of the Creation, of the Flood, of the Tower of *Babel*, of *Noah* and his three Sons; many of which are, for the substance of them, preserved among the Barbarous People of the *East* and *West Indies* at this day, as appears by those that have written the Relation, especially of the *Americans*, as *Acosta* and *De Laet*, have nevertheless been covered over with divers fabulous and devised Additions and Stories: and so it happened also among the ancient Heathenish Writers, as hath been at large demonstrated, especially by *Bochart* in his *Phaleg*.

Now as touching the Opinion of the Learned Tribe, which, as before is shewn, fell into two Parties: The one holding the Eternal Successions of Mankind; whereof in this Second Section: The other holding a First Inception of Mankind, *Ex non genitis*.

The latter Opinion far out-ballanceth the former, both in the reasonableness thereof, and the multitude and great Learning of those that so asserted it; and should, according to the propounded Method, be here declared.

But because I intend in the next Section to examin the various Suppositions of those of the latter sort, touching the Manner of the Origination of Man, I shall reserve that Business to the next Section; wherein I shall at once consider the Learned ancient Authors that hold the Origination of Mankind, and shall also deliver and examin their several Suppositions touching the same.

SECT.

SECT. III.

CAP. I.

The Opinions of the more Learned part of Mankind, Philoſophers and other Writers, touching Man's Origination.

I Have in the former Parts of this Enquiry ſhewed, that there have been among Philoſophers and other Heathen, and ſome modern Writers, Two great Opinions touching Man's Origination: 1. Thoſe that thought it indeed to be without any Origination, but Eternal; and this Opinion they took up principally upon two Reaſons: 1. Becauſe the *Medium* or Clew by which they guided themſelves, was the common, conſtant Method of Productions by ſucceſſive Generations; and they thought it more ſutable to take their Meaſures, and make their Concluſions conſonant to the courſe of Nature, which they ſaw and obſerved, and judged to be always uniform, and like it ſelf; which could not be ſuch, if Mankind had any other Method of Origination than now it hath: And in Natural Appearances, Cauſes and Effects, they thought it not becoming the *Genius* or Spirit of a Philoſopher to call in any other Aſſiſtant or Producent than what was and is the ordinary Rule, Courſe, and Law of Nature as they now find it. And by this means they thought that they proceeded conſonantly both to Nature, and to themſelves. 2. Becauſe that among thoſe ancient Philoſophers that either ſuppoſed the Origination of Mankind to be either caſual, as *Epicurus, Democritus, &c.* or to be natural, from the Earth, and conjunction of the Influences of Heavenly Bodies in ſome Periodical Aſpects; or partly natural, and partly fortuitous, or at leaſt ſpontaneous, as Inſects ariſe: I ſay, in and among theſe various Suppoſitions of an Origination of Mankind (yea and perfect Animals) *ex non genitis*, they found ſo much incertainty, improbability, and repugnancy, that they threw them all aſide, together alſo with the Beginning or Origination of Mankind, and took up that more compendious, and more ſutable, as they thought, to the Laws which they obſerved in Nature; and concluded, That the Generations of Mankind and of perfect Animals were without beginning, but always obtained in the ſame manner as now they are. Of this Opinion was *Ocellus Lucanus*, and likewiſe *Ariſtotle*, though in ſome places he ſeems to be doubtful, and although *Plato* in his *Timæus* ſeems to aſſert an Origination of Mankind, yet in ſome other places his Expreſſions are doubtful: and therefore *Cenſorinus* in his golden Book *de Die Natali*, reckons as well *Plato* as *Ariſtotle, Ocellus Lucanus, Architas Tarentinus, Xenocrates, Dicearchus, Pythagoras, Theophraſtus*, to be Aſſertors of the Eternity of Mankind.

And this Opinion I have examined in the Chapters of the Second Section of this Book, and offered Reaſons Phyſical, Metaphyſical and Moral againſt it. The laſt Moral Reaſon which I offered was; The

received

received Opinion of Mankind asserting the Origination of Man, and that as well of the common sort of People as of the Tribe of the Learned Philosophers.

The former I dispatched in the last Chapter, but the Suffrage of the *Gens literata* I reserved to this Section, because thereby at once I may with the same labour shew the Opinions of Learned Men among the Heathen, asserting the Origination of Mankind, and what their several Sentiments were concerning the manner of it: And therefore I shall be constrained herein to mention the Opinions of some of those Learned Philosophers above-mentioned, and to add some others of the contrary Perswasion, which out-ballance the former.

2. The second general Opinion, was of those Learned Philosophers that held an Origination of Mankind *ex non genitis*; and the Reason moving them to this Perswasion was, not only the great Tradition that obtained generally in favour of it, and the great reasonableness of the Supposition it self; but also the many absurd Consequences, and indeed irreconcilable Contradictions that they found in the *Hypothesis* of an Eternal Succession of Humane Generations without beginning: Insomuch that the Assertors themselves of Eternal Generations were doubtful of the truth of their own Perswasions, as will hereafter appear.

And those of this latter sort were even *Epicurus* himself, *Anaximander*, *Empedocles*, *Parmenides*, and *Zeno Citicus* the great Founder of the Sect of the *Stoicks*, with those that followed or favoured it. But above all, the great Law-giver *Moses*, who was divinely inspired; and yet if he had not that advantage of Divine Infallibility, but stood barely upon the great credibility both of his Person, his Learning, and the *Hypothesis* it self which he delivered, he hath as great a weight, even upon a natural, moral, and rational account as any, or all the rest put together. But because I intend a particular Explication of the *Hypothesis Mosaica*, I shall not mingle this among the other Opinions, but reserve it for the next Section.

The Heathen Philosophers that held the Origination of Mankind *ex non genitis*, have these things in general wherein they agree one with another, and with the Truth it self; and some things wherein they differ among themselves, and in some things from the Truth.

1. They herein agree both among themselves, and with the Truth, and with that excellent and divine Relation of *Moses*, *Gen.* 1. That Mankind is not Eternal, but had a Beginning *ex non genitis*.

2. They herein also agree among themselves, and with the Truth, That it is most absolutely necessary (if Mankind had a Beginning or Origination) it must needs be in a differing kind and manner from that common course whereby Mankind is now propagated. This is asserted by those that hold the Origination of Mankind by the Efficiency of Almighty God (consonant to the *Mosaical Hypothesis*) either immediately, or partly by the Instrumentality of Angels, as *Zeno Citicus*, *Plato* and others: it is also asserted by them that hold the Origination of Mankind to be at first fortuitous, as *Epicurus* and *Democritus*. And therefore as to these Perswasions and Suppositions, it is not only necessary that they should suppose a differing manner of the first Origination of Mankind from what now obtains; but it is consonant also to their Principles, and the grounds of

their

their Supposition that it must be so: This is also asserted by those that suppose the Origination of Mankind to be purely natural, and according to the constituted Rule of Nature. But yet this Supposition, though most necessarily true where an Origination *ex non genitis* is once supposed, yet it seems less sutable to the Principles of those Men that assert such a natural Production of Mankind as is by them asserted, because they mancipating all Productions and Effects to the Laws of Nature, and governing their thoughts, and taking their measures barely by it, have no reason to think or believe any other Method of Production of Mankind to have at any time been any otherwise than as they see it now to be; which, as is before shewn, was the reason why *Aristotle* inclined to the Opinion of the Eternity of Humane Generations, because Nature is presumed to be consonant to it self, and always to have been what once it was.

3. But in the Explication of the Cause and Manner of this Origination of Mankind, therein they differed very much among themselves.

This difference consisted principally in two great Considerations; 1. In the true stating of the efficient Cause of this Origination of Mankind: 2. In the Manner, Method, and Order of such Origination.

As to the difference touching the Cause of such Origination, and the nature of that Cause thereof:

1. Some assigned a bare fortuitous Cause of the first Origination of Mankind, as *Epicurus*, and his Explicator *Lucretius*; for although in some places they are driven to assert some determinate *Semina* of Mankind and perfect Animals, to avoid that indefinite and unlimited excursion of Atoms; yet they that suppose these *Semina*, do suppose a fortuitous Coalition of Atoms to the Constitution of these *Semina*, and so upon the whole account it is fortuitous.

2. Some assign a natural determined Cause of the first production of Mankind, namely, the due preparation of the fat and slimy Earth after a long incubation of Waters, and some admirable Conjunction of the the Heavenly and Planetary Bodies, in some certain Period of Time at a long distance from us; which as naturally and necessarily produced the first Couples of Mankind, and likewise of other perfect Animals, as necessarily and naturally as the return of the Vernal Sun produceth divers sorts of Insects, which though they are called *sponte orientia*, yet they arise meerly from a Connexion of Natural Causes, and the various Ferments and Dispositions of the Elementary, and Positions and Influxions of the Heavenly Bodies: Thus some of the Ancients, and also *Avicen, Cardanus, Cæsalpinus, Berogardus.*

3. Some of the Ancients, that most truly assign the Origination of Mankind to the most High, Intelligent, Powerful, Beneficent Being, *viz.* Almighty God, and the *Beneplacitum* and *Fiat* of his Omnipotent Will; as *Zeno Citicus.* And thus their differences arose touching the Cause of this Origination.

As to the second, namely, the different Manner of the Origination of Mankind, *Censorinus ubi supra, Euseb. præpar. Evang. lib.* 1. *cap.* 7, 8, 9. and others give it as followeth.

1. The Opinion of *Anaximander: Videri sibi ex aqua terráque calefactos, exortos esse sive pisces, sive piscibus simillima animalia, in his homines creviſſe,*

creviſſe, fœtúſque ad pubertatem intus retentos; tum demum ruptis illis, viros mulieréſque qui jam ſe alere poſſent, proceſſiſſe.

2. The Opinion of *Empedocles* and *Parmenides*: *Primò, membra ſingula ex terra quaſi prægnante edita, & deinde coiſſe, & effeciſſe ſolidi hominis materiam, igni ſimul & humori permixtam.*

3. The Opinion of *Democritus* and *Epicurus*: *Ex aqua limóque primùm homines procreatos; viz. uteros limo calefacto radicibus terræ cohærentes primùm increviſſe, & infantibus ex ſe editis ingenitum lactis humorem, natura miniſtrante, præbuiſſe, quos ita educatos & adultos genus hominum propagaſſe.*

4. The Opinion of *Zeno Citicus*, the Founder of the *Stoical* Sect: *Principium humano generi ex novo mundo conſtitutum putavit, primóſque homines ex ſolo adminiculo divini ignis, id eſt, Dei providentia, genitos.*

Ovid, though he were a wanton Poet, and his *Metamorphoſis* full of Fictions, yet in the Deſcription of the Creation he hath out-done many of the more ſerious Philoſophers; and I believe was not only acquainted with the *Moſaical* Hiſtory, but with moſt of thoſe Writings that were extant in that time, containing the Origination of the World and Mankind; though he mingle his own Fancies with what he ſo learned: He gives us an account of the Origination of Man, *Lib.* 2. *Fab.* 2. and of other Animals, *Ibid. Fab.* 8. Of the former,

Natus homo eſt, ſive hunc divino ſemine fecit
Ille Opifex rerum mundi melioris origo,
Sive recens tellus, ſeductaque nuper ab alto
Æthere, cognati retinebat ſemina cœli;
Quam natus Iapeto miſtam fluvialibus undis
Finxit in effigiem, moderantum cuncta deorum.

Touching the latter, the Origination of other Animals after the Deluge, he gives an elegant Deſcription, and from the Inſtance of the Productions after the Inundation of *Nilus*;

——— *Ex eodem corpore ſæpè*
Altera pars vivit, rudis eſt pars altera tellus.

So, after the Flood, by the moiſture of the Ground and heat of the Sun,

——— *Tellus lutulenta recenti*
Solibus æthereis, altóque recanduit æſtu,
Reddidit innumeras ſpecies. ——

As to the Origination of brute Animals, he ſeems to aſcribe the ſame in effect as happens in the equivocal production of Inſects.

But as to the Origination of Man, he ſeems to agree with the *Stoicks*, but gives thereof a fuller Explication; namely, 1. That it was a Seminal Production, and not ſo fortuitous as that of Animals. 2. That theſe *Semina humanæ naturæ* were either the immediate Productions of the great *Opifex rerum*, or at leaſt were left in the Earth by the Celeſtial Nature, while it ſtood mingled therewith *in maſſa Chaotica*: By which means, it ſeems, he thought not that the production of Mankind was

by

by a gradual process and maturation in the Earth, and from it, like the ordinary course of the Formative process *in utero matris*, in the ordinary course of Generation; but by a shorter and more compendious Method: For, according to the ancient Mythology, *Japetus* signified the Heaven, and *Japeti satus*, or *Prometheus* the Son of the Heaven, the Divine Providence which Almighty God exercised by the instrumentality of the Heavenly Motions: And the Ancients attributed the Formation or Configuration of the humane Body in its first original to this Divine Providence, whereby those Seminal Particles before described being taken and included in convenient Elementary Matter, the whole Composition was by the Divine Providence moulded up into the humane Shape and Consistency in its first Origination. This was that Notion that divers of the Ancients, and *Ovid* out of them had concerning the first Origination of Mankind; *vide Cælium Rhodogin. l. 7. cap. 19, & 20.* and seems to have some analogy with that *Hypothesis* of *Plato* in his *Timæus*, hereafter mentioned.

Thus we have an account of the Opinions, 1. Of the *Pythagorean* Philosophers: 2. Of the old *Academicks*: 3. Of the *Peripateticks*, all seeming to agree in the Supposition of the Eternity of the World: 4. Of the *Epicureans*, under which I include that of *Anaximander* and *Empedocles*, differing only in the *modus*: 5. Of the *Stoicks*, which give a true Account both of the Origination of Mankind, and of the Manner of it: where I have been the longer, because it is a Key to all that follows, and gives us a Scheme of it.

These several Opinions, and the Authors and Assertors thereof, I shall here farther illustrate and examin.

1. Touching the Opinion of the *Pythagoreans*, because we have nothing extant of his writing, I can say little more touching his Opinion; though some suppose, he was not of Opinion that the World or Mankind was Eternal.

2. Touching *Plato*, it is true, he seems very various and Poetical in his writing; and by reason of the Method of his Discourses, by way of Dialogues, it is hard to determin what his Opinion was concerning the Eternity of the World, or of the Generations of Mankind.

In the beginning of his third Book *de Legibus*, but especially in the middle of his sixth, under the Persons of *Atheniensis hospes*, and *Clinias*, he intimates his Opinion of the Eternity of the World and Mankind: Athen. *Scire omnes oportet, hominum generationem vel nullum prorsus unquam initium habuisse, neque terminum habiturum, sed fuisse omninò semper & fore; aut si cœpit, inæstimabili ante nos temporis magnitudine incepisse.* Clin. *Planè.* And again, in his *Menexemus*, under the Person of *Socrates* commending the Country of *Attica*; *Altera ejus laus erit, quod eo tempore quo tellus omnia animalia omnigena producebat, feras & armenta omnia; tellus duntaxat nostra ad hoc sterilis erat, agrestibúsque animalibus vacua, propriè verò ex omnibus animalibus hominem genuit, qui cæteris intelligentia præstat, solúsque jus ac deos colit.* And again, in his *Timæus*, in the Person of *Timæus* he gives us an Account of the Original of Mankind, and the manner of it, to this effect; That when Almighty God had made and set in order the great World, and endowed it with a living Soul, and thereby it became a great Animal; and had also made a sort of inferior Deities (*dii ex Deo*) and

endowed them also with Immortality, he brings in the great God bespeaking these inferior Deities; *Accedite vos secundùm naturam ad animalium generationem, ita ut vim imitemini meam, qua in ortu vestro sum usus. Atque ejus quidem animalis quod in ipsis tale futurum est ut cum immortalibus appellatione conveniat, divinúmque vocetur, principatúmque teneat, & justitiam simul ac vos ultro colat: Ego vobis semen & initium tradam, vos cætera exequi par est, ut immortali naturæ mortalem attexentes, faciatis generetísque animalia, subministrantésque alimenta augeatis, & consumpta rursum recipiatis. Hæc fatus, in eodem cratere in quo mundi totius animam permiscens temperavit, superioris temperationis reliquias miscendo perfudit, &c. Satis autem & quasi sparsis animis, per singula singulis convenientia temporum instrumenta, fore ut animal nasceretur, quod omnium animalium maximè esset divino cultui deditum.*

Thus he now gives us an account of the Creation of Man, namely, of his Soul by the great God. Therefore *Plato* seems not to be reckoned among the firm Assertors of the Eternity of Mankind, nor of the World; and accordingly his follower *Proclus* herein agrees with his Master.

3. Touching *Aristotle*, and the *Peripateticks* that were his followers, as *Simplicius*, *Averroes*, and others (except *Philoponus*) their Opinion seems to be for the Eternity not only of the World, but of Mankind, and of the perfect Animals: so that in *l.* 3. *de Generatione Animalium, cap.* 1. he determins, *Quod non fuit primus leo, &c.* and in his way of reasoning follows *Ocellus Lucanus*, who was a more ancient Philosopher, and tenaciously asserted the Eternity of the World.

Yet *Aristotle* himself seems not to be over-confident of this Opinion, but holds it as a Problem, and in some places seems to give Intimations to the contrary. 2. *Politic. cap.* 6. *Putandum est primos homines sive ex terra geniti fuerunt, sive ex corruptione aliqua servati, ignaros fuisse, &c.* and in his 3d *de Generatione*, upon the various Productions of the Earth and Water, *Ut animæ quodammodo plena sunt omnia:* and in his 10th *Problem*, *sect.* 15. *Qui de natura disserunt, animantia in principio orta esse dicunt ingenti aliqua mundi universique mutatione:* and in his 64th *Problem* of his 10th *Section*, *Quam ob causam animantium alia non solum coitu sed etiam sponte naturæ procreantur, alia ex coitu duntaxat proveniunt, ut Homo & Equus, etsi non ob aliam causam, tamen quod aliis gignendi tempus breve statutum est. Itaque fieri non potest ut tempus quod vim obtinet generandi amplificetur prorogetúrque, sed temporum vicissitudine prorogationéque, ut prorogetur contingit; aliis multò generatio ampliari solet: etenim vel anno vel decem mensium spatio confici assolet, quo pacto vel nullo pacto, vel ex coitu procreari illa necesse est.* So that he attributes the reason of the new production of Men and great Animals only to the time that they are to be perfected *in utero*. And *l.* 1. *Topicor. cap.* 11. he states the Question, *Whether the World had a Beginning, or not?* to be a Problem; wherein probabilities are on either side.

By these passages of *Aristotle* himself, he seems not to be so positive in his Opinion touching the Eternity of Mankind at least; but rather inclines to that for the Eternity of Generations, upon these Reasons: 1. Because he was not willing to suppose any other state of things in the World than what he found; and since he never found any production of Mankind, or the perfect Animals, *ex non genitis*, he therefore concluded them to have been ever produced in that method that he found them in the ordinary

ordinary and setled course of Nature. 2. Because, as he was not satisfied with the strange and improbable *Hypotheses* of *Empedocles*, *Anaximander*, and *Democritus* touching the Production of Mankind; so he could not excogitate any of his own which had any clearness or certainty to him, being utterly unacquainted (for ought we know) with the *Mosaical Hypothesis*. 3. Because he being a great admirer of Nature, and the ordinary proceeding thereof, he was not willing to entertain any such Supposition as was not evident, according to the ordinary method of Nature, which he so much venerated; especially such as might seem dissonant to his great *Hypothesis* of the Eternity of the general Frame of the rest of the Universe.

And therefore, *lib. 3. de Generatione Animalium, cap. 11.* upon a Supposition of a first Production of Men or Animals, he conforms his *Thesis* concerning them to his general Doctrine: *Quamobrem de prima hominum atque quadrupedum generatione (si quando primum terrigenæ oriebantur, ut aliqui dicunt) non temere existimaveris altero, de duobus his, modo oriri; aut enim ex verme constituto primum, aut ex ovo: quippe cum aut intra se habeant cibum ad incrementum necesse sit, qui quidem conceptus vermis est; aut aliunde accipere, idque aut ex parente, aut ex parte conceptus. Itaque si alterum fieri non potest ut effluat ex terra, quomodo cæteris animalibus ex parente, relinquitur necessario, ut ex parte conceptus accipiatur. Talem autem generationem esse ex ovo aut verme fatemur. Ergo si initium ullum generationis omnium animalium fuit, alterutrum de his fuisse probabile esse apertum est. Sed minus rationis est, ut ex ovo prodierint; nullius enim generationem animalem talem videmus; sed alterum tum sanguineorum quæ diximus, tum exanguium, qualia sunt insectorum nonnulla, & ea quæ testa operiuntur, de quibus agitur. Non enim ex parte aliqua oriuntur, ut ea quæ ovo nascuntur.* Thus he conforms his Position to his general Doctrin, upon a Supposition of the spontaneous Origination of Animals.

4. I come to the general Doctrine of the *Epicureans*, under which I include that of *Anaximander* and *Empedocles*, who though they differ something in the manner of their *Hypothesis*, yet they agree in the main for a kind of spontaneous production out of the Earth. 1. *Empedocles* seems to think that the Limbs or Members of Men grew here and there scattered and distinct, and that they were after concrete together by Heat and Moisture, into the stature, as it seems, of a full grown Man. 2. *Anaximander* thinks that they grew into the full stature of Men and Women in the *involucrum* of something like Fishes, and then brake out into the World, as it seems, in their perfect stature. And that near unto this was the Opinion of *Anaximander*, appears by *Plutarch, in Placitis Philosophorum, l. 5. cap. 19. Prima animalia in humore nata corticibus contenta spinosis, adultiora autem facta ad siccitatem desciviſſe, ruptóque cortice non multum temporis supervixisse.* Only in the recital of his Opinion by *Censorinus* and *Plutarch*, they both seem to agree in this, that they were of full growth when they thus broke their Prisons. 3. *Democritus* and *Epicurus* seem to think that they were hatched in these *Folliculi* or Terrestrial Excrescences, and then nourished by a Juyce of the Earth, until they were able to shift for themselves. *Lucretius* hath given us the Doctrine of *Epicurus* in Verse, in his fifth Book, *Pag. 665.* which is rendred in Prose by *Gassendus, in Syntagmate Philosoph. Epicur. sect. 2. cap. 4.*

Tum ubi terra dedit primum mortalia sêcla,
Multus enim calor atque humor superabat in arvis;
Hinc ubi quæque loci regio opportuna dabatur,
Crescebant uteri terræ radicibus apti;
Quos ubi tempore maturo patefecerat ætas,
Infantum fugiens humorem, auráque petissens
Convertebat ubi natura foramina terræ,
Et succum venis cogebat fundere apertis:
Consimilem lactis sicut nunc semina quæque
Quum peperit dulci repletur lacte, &c.

And again, *Lib.* 2. *Pag.* 265.

Denique cœlesti sumus omnes semine oriundi;
Omnibus ille idem Pater est, unde alma liquentes
Humorum guttas mater cum terra recepit.
Fœta parit nitidas fruges, arbustaque læta,
Et genus humanum, &c. ——

And afterwards, in the same Book, *Pag.* 281. he gives us the reason why the Earth gives not the same Productions now.

Jámque adeo fracta est ætas, effœtaque tellus,
Vix animalia parva creat, quæ cuncta creavit
Sêcla, deditque ferarum ingentia corpora partu.

But although *Epicurus* and his followers suppose that small and imperceptible Atoms of Matter are the first *Principia* of all Corporeal things, yet he doth suppose that these *Principia* are first moulded into *Semina*, or *Seminales moleculæ*, which were the immediate Constituents of all compleat Bodies, whether animate or inanimate; whereby all things are contained and determined within certain *Species*. *Vide lib.* 1. *pag.* 35.

At nunc seminibus quia certis quidque creatur,
Inde enascitur, atque oras in luminis exit,
Materies ubi inest quoiusque & corpora prima.
Atque hac re nequeunt ex omnibus omnia gigni;
Quod certis in rebus inest secreta facultas.

Which *Gassendus* thus renders, *Sect.* 2. *Cap.* 4. *in Syntagmate Philosophiæ Epicuri*, having given us an account of the Concretion of the Heavenly and Elementary Bodies, he thus determins out of him concerning the smaller Parts of Nature: *De minus præcipuis & veluti partium particulis, videtur in prima illa commistione effecta fuisse generabilium & corruptibilium rerum, varia semina ex quibus res variæ & conformatæ tum fuerunt, & deinceps magna ex parte propagari etiam potuerint.*

And this casual Production of Mankind at first was not only the Supposition of *Epicurus*, but also of the *Egyptians* and *Phenicians*.

Touching both, *Cælius Rhodog. lib.* 2. *cap.* 11. *Phœnicum quidem & Ægyptiorum theologia, casu homines & reliqua animantium genera prorepsisse è terra*

terra asseverebatur. And *Diodorus Siculus*, *lib.* 1. gives us a large Relation of the Opinion of the *Egyptians*, very like to that of *Epicurus* and *Anaximander*; wherein, after some declaration of the Manner of the first Separation of the Elementary and Heavenly Bodies, he proceeds to tells us; *Terram verò lutosam evasisse, & omninò mollem: Hic primum cum Solis ardore densior evasisset, ejus postmodum superficie vi caloris tumefacta, multis in locis humores esse concretos, in quibus putredines tenui contectæ pellicula sint excitatæ; quemadmodum in paludibus & stagnis Ægyptiis adhuc videmus accidere, cum frigidam terram subitò æstus aeris calefacit. Cum verò in humidis calore adhibito generatio fiat, & noctu quidem circumfusus aer humorem præstet, qui die Solis virtute consolidetur: tandem putredines illæ ad summum perductæ, adveniente veluti partus tempore, exutis confractisque pelliculis, omne genus educunt animantium: quorum ea quæ majorem sortita calorem sunt, in superiorem regionem volatilia effecta abierunt; quæ verò plus terræ continebant, serpentia, aliáque terrestria evaserunt animantia. Naturam aquosam nacta in sui generis elementum delata sunt, & appellati Pisces: Terra deinde cum Solis ardore, tum ventis deinceps arefacta, à gignendis majoribus animalibus desiit. Sed quæ generata erant, mutua commixtione alios animantes procreaverunt. Hæc & Euripides Anaxagoræ Physici discipulus sentire videtur, cum in Menalippo cœlum & terram mixta olim fuisse tradat, separata postmodum generasse singula, arbores, volatilia, feras, aquatilia, & omne mortalium genus. De prima terræ generatione quamvis præter opinionem nonnullis esse videatur, tamen ea quæ nunc fiunt testimonium his videntur afferre. Nam juxta Thebaidem Ægypti, cum Nili cessavit inundatio, calefaciente Sole limum ab aqua relictum, multis in locis ex terræ hiatu multitudo murium oritur: quod argumentum est ab ipso orbis primordio animantia similiter omnia generata esse. Eodem modo quoque & homines à principio genitos, in agris pastum quærentes vixisse.* And again, in his second Chapter of that first Book: *Tradunt Ægyptii ab orbis initio primos homines apud se creatos, cum bonitate fœlicitatéque soli, tum propter Nilum qui & multa generat, & suapte natura quæ genuit facillimè nutrit: nam arundinum radices præbet, & loton & Ægyptiam fabam, multáque præterea ad hominum victum exposita. Prima animantia apud se esse orta ea utuntur conjectura, quod nunc etiam in Thebaidis agro certis temporibus multi & magni generantur mures; quâ ex re plurimum stupent homines, cum videant anteriorem usque pectus & priores pedes murium partem animatam moveri, posteriori nondum inchoata, sed informi. Ex hoc perspicuum fieri aiunt, ab ipso orbis ortu primos homines Ægyptum protulisse. In nullo enim orbis parte accidit eo modo animalia creari.* I have transcribed it at large, as *Eusebius* did before me, *Lib.* 1. *Præpar.* because it contains a large and full Exposition of the *Hypotheses* of those Philosophers that thus suppose an Origination of Mankind, and that by a spontaneous Production.

In these precedent Opinions of *Anaximander*, *Empedocles*, *Epicurus*, and the *Egyptians*, there is something that agrees with that Truth that I have asserted, namely, The Origination of Mankind *ex non genitis*. And for this purpose these Instances are especially given by me. But there is something that I shall in what follows impugn, namely, The Method or Manner of such Productions, which according to these Mens Opinions is either purely Casual, as *Epicurus* and his followers held; or at least Natural and Necessary, as *Anaximander*, *Empedocles*, and some of the loose passages of *Aristotle* seem to import, *viz.* by some great Conjunction

of

of the Heavenly Bodies, and some great Natural Mutation in the Elementary World.

5. I now come to the farther Examination of the *Hypothesis* of the *Stoicks*, who also agree in this main Truth, That Mankind had an Original *ex non genitis*: and the Founder of that Sect hath given a rational and true Method thereof, namely, That this Origination was by the Power and Will of Almighty God: But when those of this Sect came to give a more particular Explication of the Manner of this Production, they seem to differ.

Tully was generally well inclined to the *Stoical* Sect, yet sometimes he is a *Stoick*, sometimes an *Academick*, sometimes an *Epicurean*, and indeed in some of his Discourses which he hath digested in Dialogues, he seems to be every thing.

In his first Book *de Legibus* he hath this passage touching the Origination of Man: *Nam cum de natura omni quæritur, disputari solent nimirum ista: perpetuis cursibus, conversionibus cœlestibus extitisse quandam materiam serendi generis humani, quod sparsum in terras, atque satum, divino auctum sit animorum munere. Nam quod aliquibus cohærent homines, è mortali genere sumserunt, quæ fragilia essent, & caduca: animum esse ingeneratum à Deo: ex quo verè vel agnatio nobis cum cœlestibus, vel genus vel stirps appellari potest. Itaque ex tot generibus nullum est animal, præter hominem, quod habeat notitiam aliquam Dei; de ipsisque hominibus nulla gens est neque tam immansueta, neque tam fera, quæ non, etiam si ignoret, qualem habere Deum deceat, tamen habendum sciat. Ex quo efficitur illud ut is agnoscat Deum, qui unde ortus sit, quasi recordetur ac noscat.* By this he supposeth that there might be as it were a Prosemination of the Humane Fabrick by the Conversion of the Heavens, and then the same were stored with Souls immediately produced by Almighty God.

Seneca, following the received Opinion of the Vicissitudes of the Destruction of the inferior World by Floods and Conflagrations, and the Restitutions thereof by the Power of God, though he seems to admit Eternal Vicissitudes of such Making, and Unmaking, and Restitutions of the inferior World, in the latter end of his third Book of Natural Questions, before cited, *Sect. II. Cap. 9.* speaking of the Destruction of the World by Universal Floods: *Qua ratione inquis? eadem qua conflagratio futura est; utrumque fit cum Deo visum ordiri meliora, vetera finire: aqua & ignis terrenis dominantur; ex his ortus, ex his interitus.* And in the end of that Book: *Nec ea semper licentia undis erit; sed peracto exitio generis humani, extinctisque pariter feris in quarum homines ingenia transierant, iterum aquas terra sorbebit: natura pelagus stare aut intra terminos suos furere coget, & rejectus è nostris sedibus, in sua secreta pelletur Oceanus; antiquus ordo revocabitur, omne ex integro animal generabitur, dabiturque terris homo insciius scelerum, & melioribus auspiciis natus; sed illis quoque innocentia non durabit, nisi dum novi sunt.*

And with this seems to accord the Judgment of *Plutarch*, 2. *Sympos. ac. quæst.* 3. and out of him, *Macrob. in* 7. *Saturnal. cap. ult.* where in the dissertation of that seeming ludicrous Question, *Ovumne prius an Gallina?* the Disputant for the latter concludes; *Natura primum singula animalia perfecta formavit, deinde perpetuam legem dedit ut continuaretur propagatione successio.* And *Plutarch*, *Probabile est primum ortum ex terra temporis perfectione*

fectione absolutum fuisse, nihilque indigentem hujusmodi instrumentis, receptaculis, & vasis qualia nunc ob imbecillitatem natura parat & machinatur parientibus.

This was the Sentence and Judgment of the *Stoical* Philosophers touching the Origination of perfect Animals and Men.

Upon all which foregoing Discourse it should seem, That the generality of the Learned World rather supposed an Origination than an Eternity of Mankind; and this upon two great Motives.

1. A Tradition which seems generally to have been derived unto Mankind from the first Parents thereof, and so generally believed and entertained.

2. A great congruity of Reason that attended this *Hypothesis*, and an extrication thereby of the Minds of considering Men from infinite difficulties which the Supposition of Eternal Generations doth necessarily produce.

I should now come to those Philosophers and Learned Men of later Ages, *Avicen*, *Cardan*, *Pomponatius Cisalpinus*, *Berogardus*, and others; which nevertheless I shall referr to the next Chapter to be examined to another purpose.

CAP. II.

Touching the various Methods of the Origination of Mankind.

HItherto I have endeavoured to shew those Evidences both of Reason and of Fact, which seem to assert the Origination of Mankind; and I have concluded with that last in the two precedent Chapters, namely, The Opinion and Perswasion of the Unlearned and Learned part of Mankind that have supposed such an Origination of Mankind, the weight or authority of which rests in the consideration of those Means whereby this Opinion or Perswasion hath been ingenerated in Mankind: For the Opinions or Perswasions of Men, concerning especially a Matter of Fact, have their weight or authority in argumentation from that Principle or Motive of such a Perswasion: and this I have reduced to one or both of these:

1. Some Tradition that hath been derived, and derived in probability from the first Parents of Mankind, that best knew their own Inception, which hath since accordingly prevailed almost in all Places and Ages.

2. The congruity of such a Supposition to Reason, and the Solution of those Difficulties which must needs arise from an Eternal Succession of Mankind. And this Motive of this Perswasion, though it began with the more thinking and considering sort of Mankind, yet from them hath been insinuated and derived unto the rest of Mankind, and by them entertained, as consonant to the common Reason of Humane Nature.

I have laid the weight of my reasoning touching the Origination of Mankind upon the Reasons first given in the beginning of this Tract: and I have only subjoyned those Reasons of Fact that might probably bear testimony to the truth of the Supposition, and I have endeavoured

to

to shew where the strength, and where the deficiencies of those Evidences of Fact do rest; and which are most concludent, and which not.

I have concluded all these Evidences of Fact, with this concerning the common or general consent of the greatest and learnedst part of Mankind therein; and I have concluded with this Evidence of Fact, not as if this were entertained by all: for 1. It is not without Opposers, as *Aristotle*, *Ocellus Lucanus*, and the *Pythagoreans*: and 2. Common Opinion or Perswasion of Mankind, especially touching Matter of Fact, is very fallible and unstable: 3. In this very Matter in question, there are by common perswasion of many of these Men, superadded certain fabulous, incredible and untrue Surmises touching the Manner and the Methods of this Origination, appearing in some of the Opinions delivered in the former Chapter.

But the reason why I conclude with that Instance touching the Opinions of Men, is, because it lets me in to that which is the Second principal Part of this Discourse, namely, The various *Hypotheses* of those that supposed, admitted, or believed this Origination, which are in effect all contained in the former Chapter, which I intend in the following Discourse to examin.

Therefore, having thus partly out of the common Perswasion of Mankind, but principally by the other foregoing Reasons made my Conclusion, That Mankind had a Beginning, now, as I think, delivered what may be said for the proof of this Proposition, That Mankind had their Original *ex non genitis*, and in some good measure established that Supposition; I now proceed to examin the truth or probability of those several Suppositions which are before delivered, touching the Means, Method or Manner of this Origination.

And not to examin every particular Adjunct or Explication of these several Methods, I shall divide these general Suppositions of the Ancients touching the Origination of Mankind into these three.

1. The Opinion, That the production of Mankind was *ex non genitis*, was fortuitous or casual; such was the Opinion of *Democritus*, *Epicurus*, and some others: the manner of the Explication thereof I shall hereafter consider.

1. The Opinion, That the production of Mankind was *ex non genitis*, was natural, and was founded upon a natural concourse of Causes, especially the disposition of the Earth and Water, and the Influx of the Heaven. This was the Opinion of some of the Antients, but much improved by some later Philosophers.

3. The Opinion, That the production of Mankind *ex non genitis* was by the immediate Power, Wisdom, and Providence of Almighty God, and his meer *Beneplacitum*. This was the Opinion of the *Stoicks*, and differs but very little from the Divine Truth touching Man's Creation, as it is delivered by *Moses*.

And that which is said either for or against these Methods of the production of Mankind, will be also applicable to the production of the perfect Animals that have their ordinary production *ex conjunctione maris & faminæ*, and not otherwise; though what is said concerning these Animals will be more evident touching Man, which is a far more perfect nature than other Animals.

First

First therefore I begin with the Opinion of the *Epicureans*, which was in substance this; That there were eternally an infinite number of small imperceptible Bodies, that floated up and down in a vast infinite *Inane*; and these were the *Principia* of all other Beings beneath Almighty God: these they call Atoms. That those Atoms were eternally and casually moved in this infinite *Vacuum*, and by their mutual percussions the great Systems of the Heavenly and Elementary Bodies were framed and concreted: That besides that concourse of Atoms that constituted the greater Integrals of the World, there was a certain coalition of Atoms that constituted certain *Semina* or Seminal Bodies, for the storing and furnishing the greater Integrals of the Universe, especially the Earth and Seas: That though the coalition of those *Semina* were casual, and by an accidental or fortuitous aggregation of some Atoms; yet these were the immediate, primitive, productive Principles of Men, Animals, Birds and Fishes, and that determined them in their several *Species*: That those Primordial Seeds thus fortuitously coagulated out of the *Prima principia*, or Atoms, were scattered by their Motion into the Earth and Seas: That by reason of the strength of the newly coagulated Bodies of the Earth and Water, and the heat of the Sun, these *Semina* did bring forth Man, and Brutes, and Birds, and Fishes; but that by the decay of the strength of the Earth and Waters, that Method of production of Men and perfect Animals is ceased, and their production now delegated ordinarily to Propagation: though in some places, and at some times, especially between the *Tropicks*, such a Pullulation of Men and Beasts may be supposed to be: That yet to this day the spontaneous production of some sort of Vegetables and Insects continues still in force, the Earth and Waters being furnished with a sufficient store of such *Semina* either of old or daily production; and with a sufficient strength, by the help of the Solar or Ethereal Heat, to perfect their productions: That the first spontaneous production of Men and the perfect Animals was in certain *Folliculi* or Bladders, excrescent from the Earth; and the growth of these Men and Animals gradual, being first *Embryones*, then grown ripe for Birth, then breaking out of those *Folliculi*, and furnished with nourishment from the Earth, *instar lactis*, till they were able to shift for themselves.

Touching this Supposition, although it contain in it that Truth that I have hitherto contended for, namely, That Mankind had an Original *ex non genitis*; or, That the Generations of Mankind in that order which now it holds, was not Eternal: yet the Manner or Method of this *Epicurean* Origination of the World, and particularly of the perfect Animals, but especially of Mankind, is meerly fictitious, untrue, and impossible.

1. The *Principia* or Atoms of infinite number floating in *Vacuo infinito*, is a thing meerly invented, and hath neither truth, nor evidence, nor probability in it.

2. The Motion of these Atoms in this great *Vacuum*, unless first excited or put into Motion by some intelligent active Principle, is fabulous and incredible.

3. The Coalition of these Atoms by fortuitous strokes or motions, and their Coalition into that admirable Order and Constitution which

we see in the Universe, or greater Integrals of this *Mundus aspectabilis*, is utterly incredible, and indeed impossible. But these things being beside my present purpose, and deserving a large prosecution, I shall dismiss.

4. Touching these *Semina*, and the Coagulation of them by the fortuitous coalition of Atoms, they were driven to this Supposition, because they found themselves at a loss, if they should have supposed, that *per saltum* their Atoms had been the immediate Constituents of Men and Animals; they could never have salved that specification of things in their several kinds, and the continuation of them in that constancy and order which is evidently found in the natures of Men and Animals; but either there would be an utter incertainty in the first Constitution of them, *quidlibet ex quolibet*; or at least it were impossible that they should continue their Propagation of their kind, but the constituent Atoms that should make up a Man, might have fallen into the Constitution of a Horse, or a Lion. *Lucret. ubi supra.*

Atque hac re nequeunt ex omnibus omnia gigni,
Quod certis in rebus inest secreta voluntas.

And again, *Lib.* 2.

Non tamen omnimodis connecti posse putandum est
Omnia: nam vulgò fieri portenta videres,
Semiferas hominum species existere,——
Quorum nil fieri manifestum est, omnia quando
Seminibus certis certa genitrice creata.

And again, it were never explicable by the various concourse of Atoms, that there could be such an orderly, constant, and admirable accommodation of the parts of the Body to their use, or one to another. It is truly said by *Galen* in his 9th Book *De Hipp. & Platonis decretis, l.* 9. *Quippe cum artem raro fine suo frustrari, fortunam raro eundem assequi, nemo sit qui nescial; quocirca temerariam & fortuitam, neque artificialem causam fabricæ nostri corporis existimare, absurdum.* And again, in that divine Book *De Usu Partium*, but especially *Lib.* 11. that excellent Philosopher shews the gross absurdity and impossibility that any happy concourse of Atoms can ever fit and settle that congruity in the Parts of the Humane Body that is there. There needs no other Confutation of the vanity of that Opinion, than that excellent Expostulation in that Book, fit for the matter, but too long for the tenth of it to be here transcribed.

And therefore to avoid that insuperable absurdity, they have substituted a *Medium* between the Atomical Principles and the constitution of the spontaneous Birth of Men; namely, these *Semina*, made up to be the immediate Principle of these spontaneous Productions of Mankind, as also of perfect Animals in their first production.

What *Semina* there were in the first Constitution of Mankind, I shall have occasion at large to examin in the next Chapter: But at present it shall suffice to say and prove, That there is as great an absurdity and impossibility to suppose a casual production of such *Semina*, as there is to

suppose

ſuppoſe an immediate caſual production of any Man or Animal *omnibus numeris perfectum.*

For this *Seminium humanæ naturæ* muſt have in it the Vital Nature, the power of attracting to it ſelf that ſubſtance which muſt ſerve to make up the Individual: It muſt have the power and energy of that formative act, whereby the Matter is conformed to its ſpecifical Nature; it muſt have potentially at leaſt the whole Syſteme of Humane Nature, or at leaſt that Ideal Principle or Configuration thereof, in the evolution whereof the complement and formation of the Humane Nature muſt conſiſt; and beſides this, it muſt have in it at leaſt potentially all the Faculties of the Humane Soul, not only the *vim altricem*, but the *vim ſenſitivam & intellectualem*, and all this drawn from a fortuitous coalition of ſenſeleſs and dead Atoms. Whereby theſe two grand Abſurdities would enſue:

1. That a ſort of dead, ſenſeleſs, unintelligent Particles of Matter, ſhould by their Coalition be advanced into a Being, that at leaſt potentially hath all the Faculties of Life, Senſe, or Intellect, and ſo ariſe to a perfection beyond the Sphere and Circle of their own Nature or Power.

2. That though it might be poſſible, that by skill and the wiſe conduct of an Intelligent Being, theſe Atoms might be ſo marſhalled or qualified, that they might advance to be a fit *Seminium* of a reaſonable Creature, yet it is not poſſible to ſuppoſe, that meer Chance or Fortune ſhould make up theſe Seminal Rudiments of the Humane Nature, becauſe the Actions of this Seminal Principle muſt be ſo noble and high, and yet ſo various and complicated, ſo curious and choice, that it is never poſſible for Chance to make it up, and yet if the leaſt *ſtamen* of this Compoſition be out of order, the whole office and uſe thereof is diſappointed: And therefore the ſame *Galen* makes the *proceſſus formativus fœtus* to be no leſs admirable than the goodly ſtructure of the Humane Body, and as impoſſible to be the work of Chance as the other: And therefore in his Book *de formatione fœtus* he ſaith, *Ego vero, ſicut fabricam noſtri Corporis oſtendi ſummam Opificis & ſapientiam & potentiam præ ſe ferre; ita demonſtrari à Philoſophis velim, utrum is Opifex Deus aliquis ſit, & ſapiens & potens, qui & prius intellexit quale uniuſcujuſque animalis corpus eſſet fabricandum, & deinde quod propoſuerat potentia fuerit aſſecutus; an Anima aliqua à Deo diverſa. Neque enim naturæ quæ appellatur ſubſtantia, ſive corporeæ ſive incorporeæ ea ſit, ad ſummum ſapientiæ dicent perveniſſe, quam ne ulla ſapientia eſſe præditam inquiunt, unde eam tam artificioſe in fœtuum formatione ſe geſſiſſe credendum non eſt: Hoc enim ab Epicuro aliiſque qui ſine providentia omnia fieri opinantur audientes, nullam fidem adhibemus.* And in the Concluſion of that Book he as well blames the *Platonicks*, *Dicentes Animam mundi fœtus formare: nunquam tamen adduci potui ut crederem Scorpiones, Phalangia, Muſcas, Culices, Viperas, Vermes, Lumbricos, Pytalas ab eadem fingi & formari, prope ad impietatem accedere hanc opinionem ratus.* So far was he from thinking it poſſible for the Nobler Natures of Mankind, or perfect Animals, to be the work of the *Anima mundi* (much leſs of Fortune) that he could not ſuppoſe it a ſufficient Cauſe of the Generation of Inſects.

And beſides all this, although a Man that hath received the Principle of Believing, that Almighty God might indeed *ad beneplacitum* mould up certain *ſemina humanæ naturæ*, and endue them with that admirable

Formative Power: Yet surely for a Man that (as *Epicurus* did) pretends to be guided by the Conduct of Nature only, to suppose a thing so strange to the nature of things, as they now appear, that there should be another kind of *semen humanum* or *animale* than what is moulded in the Bodies of Men or Animals, and elicited from them by a coincidence only of stupid, dead, and senseless Atoms, seems below the *Genius* of a Philosopher. *Oportet enim Physicam similiter se habere in omnibus.*

5. And as his Supposition of these *Semina*, thus casually produc'd, seems unconsonant both to the Reason and Course of Nature, so his Supposition of the Manner of the Generation, and Production, and Nourishment of this *Fœtus*, seems a Fiction utterly inconsonant to the whole Method of Nature, in relation to Mankind: For what Person, or what Age or Country, ever saw any such kind of Production as this? any such *folliculi humani fœtus?* Or that ever credibly heard of any Man conceived *nisi in utero muliebri?* abating some of those Fables that *Fortunius Licetus* delivers in his First Book, *cap.* 28. or such as have been begotten by an abominable conjunction.

Again, how is it possible, that an Infant, whose Nature cannot be kept alive one moment *sine calore uterino*, should be preserved in Bladders adhering to the cold Earth? Or that that Infant, who by the very course of Nature cannot be supported without the care and oversight of others for divers Months, nay some Years after his Birth, should be able *sub dio & Jove frigido* to preserve it self? Again, who ever saw, or credibly heard of those *venæ lacteæ* arising in the Earth, and yielding a suitable nutriment to a new born *Fœtus?* These Suppositions must withall suppose a total Inversion of the Course and Nature of Things quite from what they now are, and in all Ages have been; which, though it is true, those that admit a higher Principle than Nature, do and may with sufficient warrant and consonancy to their *Hypothesis* admit, yet is utterly unreasonable for such a Philosopher, who not only with some of the ancient *Peripateticks* excludes any Divine Providence below the Moon, but wholly exterminates it, *ultra flammantis mœnia Cœli.*

And this is all I say at present, touching that Opinion which supposeth a meer casual Production of Mankind. There will be something in the ensuing Chapter, which though it be applied to the Imaginary *Hypothesis* of the Natural Production of Mankind, yet will be of use in relation to this *Hypothesis* of the Casual Production of Mankind.

CAP. III.

Touching the Second Opinion of those that assert the Natural Production of Mankind ex non genitis, *or the possibility thereof.*

THe second Opinion is, that by a certain kind of natural Connexion of Causes, Mankind not only may be, but in their first Origination were produced *ex non genitis:* Which though for distinctions sake from the ordinary course of Generation we may call spontaneous or accidental, yet the same, if it were true, were truly natural, and deduced by a certain

certain Chain of Natural Causes; as the yearly production of Insects, *ex putri materia*, or, as the Mice or Rats in *Egypt* are supposed by *Diodorus Siculus* to be produced after the decrease of *Nilus* in *Egypt*.

This seems to be the Opinion of some of the Ancients, that yet subscribed not to the *Hypothesis* of *Epicurus* touching the casual production of things by the uncertain concourse of Atoms, as of *Anaximander* and some others, which I shall not need here again to repeat; and the same Opinion hath been asserted by others, but with these two Correctives.

1. That the same is no casual and fortuitous Production, by the meer casual conjunction of Atomical Bodies, as *Epicurus* would have the first *Semina*, at least of Men and Animals, to be made up; but by an ordinary, natural, and necessary connexion of Natural Causes and Effects.

2. That yet many of them blame the Ancients, as being too venturous in telling us the particular Method or Order of these Productions out of *Folliculi*, or *Cortices spinosi*, or Fishes, because that is not a thing discoverable by Experience, or Natural Light; yet herein they agree, That this Production may be, and hath been a Natural Production *ex non genitis*, though the particular Manner of it is not so easie to be certainly explained.

Hippocrates the great Physician seems to have inclined to this Perswasion; for, *Sect. 3. de Carnibus*, he writes to this purpose; *Quod Calidum vocamus, id mihi immortale esse videtur; cunctáque intelligere, videre, & audire, sentiréque omnia tum præsentia tum futura, cujus pars maxima cum omnia perturbata essent in supremum ambitum secessit, quod mihi veteres videntur Æthera appellasse: altera pars locum infimum sortita Terra quidem appellatur, frigida & sicca, multáque motiones habens in qua multum sanè calidi inest: tertia verò pars medium aeris locum nacta est, calidum quid existens: quarta pars, terræ proximum locum obtinens, humidissima & crassissima. His igitur in orbem agitatis, cum turbata esset calidi pars magna, alias in terra relicta est, partim quidem magna, partim verò minor; & alias etiam valde parva, sed in multas partes divisa, & temporis successu resiccata terra ista, in ea tanquam in membranis contenta circum se putredines excitans, & longo tempore incalescens, quod quidem ex terræ putredine pinguedinem sortitum est; & minimum humidi habens, id citissimè ossa produxit:* And then assigns the Methods of conformation of the Nerves, Veins, Arteries, and the rest of the Body in conformity to this Supposition. So this great Physician and Naturalist delivers his Opinion. Wherein we may observe, that he takes the Hot or Fiery Nature to be God, knowing and understanding all things; which seems to be the ancient Error of the Eastern Countries, especially the *Persians*.

Yet this is observable, 1. That he supposeth an Origination of Mankind after the Formation of the World. 2. Though the Formative Process of Mankind seems in his Opinion to be in a sort Natural, yet he supposeth it not purely so, but a Production by those fiery Particles which were Particles of a Divine Intelligent Nature. And though he be mistaken in the Method of the Origination of Mankind, as shall be shewn, yet he supposeth it, *Opus intelligentis Naturæ agentis per scientiam.*

Avicen in the second Book of his *Metaphysicks*, *cap.* 15. delivers his Opinion; *Possibile esse hominem generari ex terra, sed convenientius in matrice:* which Opinion *Averroes* his Country-man perstringeth with some indigna-

indignation, *Commentar.* 8. *Physicor. cap.* 5. *Iste sermo ab homine qui dat se scientiæ, est valde fatuus:* his Reasons, I confess, are such as may not be admitted; for being a rigid Assertor of the Eternity of the World in the state it now stands, he formeth his Reasons against the Opinion of *Avicen* principally, if not altogether, upon that *Hypothesis.*

Cardanus, in his ninth Book, *de Animalibus quæ ex Putredine generantur*, discoursing about Locusts, hath this passage; *Et non solum ea minuta, sed & majora animalia è putredine, imo omnia credendum est originem ducere; cum jam de Muribus constet, & Pisces in aquis recentibus sponte generentur:* but his severe Corrector, *Julius Scaliger*, in *Exercit.* 193. calls it, *Illa impia & nefaria vox; Si Bos aliquando ex putri ortus est, cur post hominum memoriam ex ejusmodi procreatione nullus exstitit? Cæsalpinus*, in his fifth Book *Quæstionum Peripateticarum*, *cap.* 1. undertakes an entire Defence of the Position of *Cardanus*, and contends not only that it is possible, but that *de facto* it is true. The sum of his Opinion seems to be this,

That although the Soul of Man be of a higher nature and extraction, yet the Body, and these Powers or Faculties of Life and Sense may be, and have been formed *ex putredine*, without the conjunction of Sexes; as Weeds, Vegetables, and Insects.

And that he meaneth such a Production to be by an ordinary course of Nature, he largely insists upon that Axiom of *Aristotle, Sol & homo generant hominem;* which he understands *in sensu diviso*, and that there is in the heat of the Sun an active, generative Principle, which in Matter prepared for its operation, commonly called Putrefaction, produceth a Seminal Formative Seed, sufficient of it self for the production of the Humane Nature, as also of the nature of other Animals.

That the *Species* of Animals are eternal, not upon the account of an eternal succession by ordinary propagation, but by that succession that would arise in certain great Conjunctions of the Heavens, and the heat of the Sun, which would be productive of the Individuals of the several *Species;* though all the *Species* of Animals were destroyed by Floods or other accidents, as possibly they might be.

That although the ordinary Method of preserving the *Species* of Men and Animals by ordinary Generation, be fitted for the ordinary continuation of the *Species;* yet without this Method of production out of prepared Earth, Nature were defective, and wanted a sufficient Expedient for the preservation of *Species* upon great Occurrences.

That although this production of Men and perfect Animals *ex putri* be not obvious to our ordinary Experience, it is not because the Supposition wants truth, but because 1. Every place is not fit for such a production, but where there is a constant and sufficient heat, duly to prepare and digest the Matter. But the likeliest place for such production is some unknown place between the Tropicks, where the heat is great and constant. 2. Because the maturation and ripening of such Productions require longer time than that which is sufficient for the production of Insects: for we see greater Animals, even with all the advantages of the *calor uterinus*, require a longer time for their formation and maturation; as, a Man nine months, an Elephant two years; and consequently, their productions without this *auxilium uterinum* must require longer time.

Then

Then he gives us a large account touching Insects, that arise *ex putredine*, and yet are of the same *Species* with those that are produced *per coitum*; and that when they are produced *ex putri materia*, yet they propagate successively Individuals of the same kind: and that if greater Animals were thus produced, they would be of the same *Species* with the like Animals propagated *per generationem ordinariam*, and would accordingly propagate their kind; as many Herbs and Trees arise spontaneously, yet are of the same *Species* with others that are *per seminationem*, and produce Seed, and thereby continue their *Species* as well as others that arise *per proseminationem*.

This I take to be the effect of his Position and his Reasons, which are very learnedly and smartly refuted by *Fortunius Licetus*, in his first Book *de Spontaneo Ortu*.

But yet there was one difficulty which *Cæsalpinus* doth not at all, as I remember, obviate, which yet renders his Supposition utterly inexplicable; namely, since the Heat and Influences of the Heavens, even in their supposed extraordinary Conjunctions, must needs be uniform at those times, and in or near those Climates wherein they happen, how comes it to pass that the same univocal Heat doth produce at that time any variety of Animals? why should it not produce only Men, as the best of Animals, rather than Horses, Tigers, Lions, *&c.* Again on the other side, since the disposition of all the parts of Terrestrial Matter is so divers, and qualified with infinite combinations of Qualities and Particles, how it comes to pass, that in these great Conjunctions there are not infinite varieties of things produced, but they are determinate in certain Ranks and *Species* of Being; whereas the modifications of the Matter are so various and infinite, that the *Species* of things would be infinite, irregular, *Humano capiti cervicem equinam.* So that there seems necessary some superintendent Intellectual Nature, that by certain election and choice determined things in those determinate Ranks, and contained them within it: For the heat and influence of the Heavenly Conjunctions and of the Sun being common and universal, and the various Particles of the Earth variously modified and qualified, there could never only by these means be any determining or containing the *Species* of Animals within any determinate constant figures or bounds: And this we shall hereafter find necessary, when we come to consider the determination of Insects also in their several *Species*.

Again, he gives us not any reasonable Explication by this *Hypothesis* how the discrimination of Sexes happens, how all things thus produced come to propagate their kind, and to contain their Productions within the specifick limits of the natures of such Animals; all which were necessary to be done, to render his Supposition of this natural production of Men or Animals *ex putredine* to be any way tolerable.

Beregardus therefore in his 10th *Circulus Pisanus* hath refined and rectified this *Hypothesis* of *Cæsalpinus*, and of *Pomponatius* that went before him; and though he can never make out the truth or probability of his Supposition, yet he hath rendred it more tolerably explicable, especially in relation to the forementioned deficiencies; I will give the sum of his Supposition briefly, as I understand it: And it seems thus;

That the *Calidum innatum* is that *Altrix anima*, and *Principium seminale*

sine

ſine quo nihil gignitur, and is the *Baſis* of Life in all things that have it; but yet it is never ſingle, and by it ſelf, but is the firſt Rudiment of Life, and determined by the particular *Species* of Life in every Individual that hath Life: for there is no *vivens* that is not either *Equus*, or *Canis*, or *Vitis*, or ſome other determinate Vegetable or Animal.

That there are three kinds of this Life wherein it is ſpecifically determined, *viz.* Vegetable, Senſible, and Rational.

That at leaſt the two former (he means the latter alſo, if he durſt ſpeak out) are raiſed out of certain Seminal Principles, whereby the *Calidum innatum* is ſpecifically determined to this or that Specifical Life.

That theſe *Semina* are not eternal, becauſe made up of things or *Principia* that are pre-exiſting: this ſeems perfectly to agree with the Doctrine of *Epicurus* before mentioned, whoſe Patronage he ſeems to take in the Perſon of *Ariſtæus*, yet with ſome Correctives, as is hereafter ſhewn.

That there were in Nature various kinds of *Calida*, or Fiery Particles, or *Spiritus ignei*, and various kinds of *Humida* and *Frigida*; theſe were eternally floating up and down in ſmall Particles, and variouſly agitated and mingled, which made up by this mixture the conſtituent *Semina* of Vegetative and Senſitive Natures.

That in this Conſtitution of the various kinds of the *Spiritus ignei* were the conſtituent *Animæ vegetabilium & ſenſibilium*, and the various kind of *Humores* were the *Oleum* and *Balſamum vitæ*; and according to the variety of theſe *Spiritus ignei*, which were as it were *Seminium naturæ*, were the various *Species* of theſe *Semina*, and the various ſpecifical production of Vegetable and Senſible Natures aroſe from them.

That the Compoſition of theſe *Semina* was not meerly fortuitous, as *Epicurus*, but he gives us a more gentle Explication thereof; *Præcipua verò & planè divina eſt permiſtio iſta, quæ in particulas diffringuntur minutiſſimas, & quantum ſatis eſt ad componendum ſemen miſti alicujus aptiſſimè coagmentantur, ut non magis quam par eſt, neque minus illud efficiant; quippe ſunt naturæ ad hoc determinatæ.*

That theſe are the Seeds of all living things, and they were ſcattered up and down in the Earth and Waters; and that therefore every living Being had its proper *Semen* for his Origination there lodged.

That yet till the Matter wherein theſe Seeds were lodged were conveniently prepared, there would be no production of Animals by theſe Seeds.

That the *Semina* of Mankind, and of the greater Animals required a greater and more effectual preparation of the Matter, or a *Menſtruum* for their production out of thoſe *Semina*, and therefore required the greater Conjunctions of the Heavens for their production; though ordinary Conjunctions ſerve for the production of Inſects and Vegetables, namely, the regreſs of the Sun.

That by theſe *Semina* of all living Beings, though the World were eternal, there might be ſucceſſive Supplies and Reparations of Animals and Men; and though the whole *Species* of Men and Animals were deſtroyed, yet upon the returns of theſe great Conjunctions and Poſitions of the Heavens requiſite for a due preparation of the *Menſtruum* in the Earth for theſe *Semina*, their *Species* would be reſtored out of theſe *Semina*.

That

That the *Terrigenæ* might either be produced *adulti*, and so able to shift for themselves; or else be furnished with a convenient nourishment from the Earth; or that they might be in their first production not like Infants new born, but able to get their livelihood, as some young Brutes are.

Thus we have the Supposition of this witty Man also, who by the supposition of these antecedent *Semina*, made up of the divers *Spiritus ignei* and *Humores*, hath supplied what was wanting in *Cæsalpinus*, or at least better explicated it; and by supposing this mixture of these *Spiritus ignei* and *Humores* in their several proportions, by something more than a fortuitous means, hath something rectified the exorbitancy of *Epicurus*; though still he suppose those *Spiritus ignei*, which were as it were the various Souls of those various Seeds, and afterwards of the several Animals produced by them, were natural and eternal.

That which seems to have given the original ground-work of all these Opinions, hath been,

1. Some Expressions that fell from *Aristotle*, which are before mentioned, that seem to give countenance to this Opinion.

2. A proud vanity in Men of Wit, to resolve all things into Nature and pure natural and necessary Causes, unwilling to recognize the interposition of Almighty God, and his *Beneplacitum* in the Origination of things, and yet finding too many absurdities accompanying the *Hypothesis* of Eternal Generations of Mankind, *ex successivis genitis*.

3. But principally the Observation of the spontaneous production of Insects and little Animals *ex putri materia*, whose structure nevertheless is as admirable as the structure of greater Animals; and that they also being thus originally produced, yet propagate their kind by successive Generations, have distinction of Sexes and Faculties: This, it seems, principally gave start to this Opinion touching the like Origination of Mankind and greater Animals by a natural spontaneous production.

And because this Instance of the natural production of Insects is that, which as it probably gave the rise to this Opinion for the like production of Mankind or other Animals, and seems to be the only experimental Instance that is given to assert the possibility or probability of the other, I shall consider it largely under these several Examinations.

1. Whether there be any *sponte orta* among Vegetables and Insects, but especially the latter.

2. Admit there be, yet whether those *sponte orta* do arise meerly from any natural or accidental Cause.

3. Admit they may arise from any natural or accidental Cause, yet whether there be any consequence of a like possibility in the Origination of perfects Animals, but especially of Mankind.

4. Admit it may be possible in Speculation, yet how far forth *de facto* the same hath happened without the interposition of the Divine Power; which renders it a supernatural, not a natural production.

CAP. IV.

Concerning Vegetables, and especially Insecta Animalia; *whether any of them are* sponte orta, *or arise not rather* ex præexistente semine.

THere are several Ranks of Being in this inferior World, which have various specifical Degrees or Ranks of Perfection one above another.

The first division of them is into things Inanimate, and things that are Animate; wherein the latter have another, and a nobler Form, or (if that Word be disliked) Nature than the former.

Of things Animate there are three distinct natures, the latter exceeding still not only in degree but in kind, perfection, and excellence of nature the former; namely, things vegetable, that have simply Life, with those operations incident to Life. The second sensible, that have not only a Life of vegetation, but a Life of sense, and faculties, and operations corresponding to it. The third rational or intellectual, that hath not only a Life of vegetation and sense, but an intellectual Life, and faculties and operations subservient and suitable to that Life.

Among Vegetables, as to the purpose in hand, there seem to be two kinds or degrees: Some are the more perfect, which do not ordinarily arise but from Seminal Particles immediately derived from the Vegetable, either the Root, or the Branch, or the *Semen formatum* of these Vegetables; as an Apple-tree, or a Rose, *&c.*

Others seem to be less perfect, because they seem oftentimes to arise equivocally neither from Seed, Root, or Branch of the same *Species*, as well as from it.

But even in all these there are none but arise from a vegetable Principle, and not barely from what is inanimate; and for the most part, if not altogether, from a vegetable Principle or *Semen* of the same kind.

1. It seems that the upper superficies of the Earth at least, is plainly a Vegetable Nature; and that it is no more forcible Argument to say that the Grass of the Earth, Nettles, Docks, Thistles, and such like common excrescences are no more spontaneous productions in the Earth, than the Feathers upon Birds, or the Hair upon Beasts or upon the Heads of Men are a spontaneous production: for though these are excrementitious, and not really parts of the Bird, Animal, or Man, but growing in the Pores of the Skin, and having the Roots there as the Grass or the Thistle hath in the superficies of the Earth; yet they grow, and are nourished from that vegetable power that is in the nature of Animals: so that they are but vital Excrescences from a vital portion of the Earth, namely, its Superficies.

2. Again, it seems that there is scarce, if at all, any Vegetable that is in the Earth, but it ariseth *ex præexistente semine specifico.*

The *Semina* of Vegetables are of two kinds, according to their several natures; some are formally Seeds, those *Moleculæ seminales*, that are the choicest spirituous parts of the Vegetable moulded up into a specifical Seed:

Seed: And hence it is, that some smaller sorts of Herbs that yield a natural Seed dye the Winter after they have produced; partly, because they have as it were performed their trust that Nature committed to them for the preservation of their kind; but principally, because they have delivered up into the Seed that Vital Particle which maintained their own Life when they had it: And therefore such Herbs, if their semination be prevented by being cut, survive to the next Year.

And these Seeds are very numerous and various, and many times very small, whereby they are many times accidentally transplanted into great remote distances: for Instance, sometimes by Floods of Water and sometimes by Winds, sometimes by Birds, sometimes by Beasts, who taking them in among grosser nutriment, and by reason thereof, and of their smalness, escaping without maceration, they retain their seminal nature in their very Dung; and sometimes by Exhalations, for the Exhalations will sometimes lift up things of some bulk, together with the watry Vapours: we have seen it rain little grains like Rye, which upon search have been found Seeds of Ivy: and therefore those small *Moleculæ*, that are almost imperceptible, may with much more ease be raised, and transplanted as it were by the motion of the Clouds into other places or Countries, which may be conjectured to be fortuitous, and yet are truly and really univocal. This *Pliny* witnesseth, *lib. 19. cap. 3.* of the Herb *Laserpitium*, whose Seed was transported, and sowed in a strange Country by a storm of Rain.

Again, there be some Seminal Parts of Herbs and Trees which produce their kind, though without that formal Seed whereof we have spoken; and commonly such Seminal Parts are either of the more imperfect sorts of Herbs or Trees, or else a very great coacervation of the Parts of those that otherwise require a more regular Seed.

There is scarce any Tree but these three parts are actually prolifick of of its kind; 1. The Seed: 2. The Root: 3. The Branch or Buds, with incision into another Tree or Stock: the Branch of an ordinary Apple will not grow being set in the ground, but the Branch of a Willow, Codling-Tree, or Vine will take root being set in the ground. The Oak will not ordinarily grow but by the Seed or Root implanted; but common experience shews us that a woody ground of Oak, or any other Wood which hath stood long, and is after felled, will run to Oak again, though the Root be dead; a great quantity of the Leaves, Wood, *Cortex* or Rind putrified in the ground will leave a *Seminium* in it, which will after turn to a Wood of Oak again. And many Plants have all their Parts Seminal, though not so vigorous as the regular *Semen* of those Plants; the Branches and Leaves, nay if we believe those that pretend to have tryed it frequently, the Decoction, Infusion, Ashes of some Herbs scattered in good Mould and well watered, will produce their proper *Species*. *Vide Kircher. in Mundo subterraneo.* And I do perswade my self, that the common Dew exhaled from some sorts of Herbs or Weeds, but especially from the common Grass, carries with it the Seminal Tincture of the Herb, which being again descended by Dews or Rain upon the bare and naked Earth, re-produceth the same *Species*: and hence it is that Grass, which is the ordinary fruit of the Earth, and therefore most visited with the Dew of Heaven, and re-exhaled again, doth most

ordinarily re-produce Graſs. And therefore Virgin-Earth taken out of the bottom of a Well and kept in a Houſe, will, if at all, be very long before it will gain that Veſture; but expoſed to the Air, where the Dew or Rain falls, it will ſoon be green, as thoſe that have tryed it affirm: Sir *Francis Bacon*, Nat. Hiſt. *Cent. 6. pag.* 117. and upon the ſame reaſon it is, that (as the ſame Author there obſerved) forein Earth will incline to bring forth Herbs of the ſame Country whence it was brought, becauſe probably impregnated with the Seminal Particles of the Country whence it came.

It is true, many times Plants and Herbs, though ariſing by a ſpecifical *Seminium* of their own Herbs or Plants, will ſeem to change their figure, and become of another kind; as by tranſplanting wild Flowers or Herbs into Gardens where the mould is better, or *è converſo*, the poorneſs or richneſs of the Soil varies the ſhape or extent: Thus ſome ſay Corn will degenerate into Tares; Fruits will degenerate, being ſown: And again, mixture of Seeds, or Seeds impregnated with Tinctures of other Seeds or things may change their ſmell, colour, taſt, or figure. But in all theſe Tranſmutations, whether for the better or the worſe, ſtill the Seminal Specifical Principle remains.

So that it may ſeem that we are too haſty and inconſiderate, in concluding that all Trees and Herbs not produced *ex ſemine formato*, are therefore *ſponte nata*: for there be infinite means of tranſplantation of real Seeds, and very many *Seminia* or Seminal Particles of Vegetables that we know not. I do remember, many Years ſince, I found in a Ground that had no Oaken Trees in it, nor very near it, yet every Year abundance of young Oaks growing up ſome two, ſome three Inches high; and I thought them to be all *ſponte nata*, and concluded an Oak to be of another nature than I formerly thought: But Obſervation corrected my miſtake; for I found the Crows fetching the Acorns from a Wood not far off, and when they had eat what they pleaſed, they hid the reſt for their future ſupply, but forgot them, and the next Spring they proſpered into young Oaken Plants. We are not therefore preſently to conclude every Vegetable *ſponte natum*, becauſe we ſee not its proſemination.

But the Conſideration of Inſects is that which is of more congruity to this preſent purpoſe, becauſe they are ſenſible Beings, and have in their little Model almoſt, if not altogether, all the Organs and Faculties of the greater Animals; yea and Phantaſie and Imagination, and Memory, as appears eſpecially by Bees and Ants, who find their ways home from a great diſtance. But yet we muſt ſay, that their Faculties and Organs, though admirable, yet are not of equal perfection with thoſe of the nobler kind of Animals, as will appear more hereafter.

They alſo that ſeem to have their Origination *ex putrido*, or ſpontaneouſly, yet it is evident to Experience that they do propagate their kind; contrary to what was thought by *Ariſtotle* in his Book *de Gen. Animal. lib.* 1. *cap.* 1. who ſuppoſeth, *At verò quæ non ex coitu ſed ex putri materia oriuntur, ea generant quidem, ſed genus diverſum.*

And touching theſe Inſects, though they ſeem to be *ſponte orta*, yet there is much may be ſaid that their Original is not ſpontaneous, but that even thoſe Inſects that ſeem *ſponte orta*, ariſe one of theſe ways:

1. Either

1. Either immediately, *ex semine prioris Insecti ejusdem speciei*; 2. Or mediately, *ex hujusmodi semine*; Or, 3. *ex vivo animali diversæ speciei*; Or, 4. *ex mortuo animali diversæ speciei, seu cadavere*: For some think that it is not easily grantable, that a Being endued with Sense can by the course of Nature arise from a Being without Sense, or at least without Life. *Vide Kircher. l.* 12. *Mundi subterranei*; *Fortunium Licetum, de Insectis.*

Touching the first of these; many of those Insects that seem to be *sponte orta*, do indeed immediately arise from the *Semina* of Insects of the same kind: for these Insects for the most part *ex coitu* do produce an innumerable multitude of little Eggs or *Semina*, that sometimes in the same Year grow to Animals of the same kind; and sometimes their *Semina* are deposited in some Cranies or Coverts of the Earth, or Trees Leaves, or other Receptacles that serve for the *Seminium* or Store of the next Spring.

Malpighius, that hath made a curious disquisition touching the Silk-Worm, tells us, that the usual product of that Worm in one Year is never less than 300, but most often 500 Eggs, most of which are *fœcunda*; and the like is visible in Caterpillers, Flies, Worms, Frogs, Locusts, Wasps, and all other Insects.

It is true, the Winter destroys most of these Insects, and many of their *Semina*, and therefore the colder the Winter is, the less the next Spring is infested with them: But many of these *Semina* are preserved till the next Spring, and then they assume their specifick Life by the heat of the approaching Sun.

These *Semina* being very small and light, are many times dispersed into other places by the Winds, sometimes carried away to other places by Waters and Floods, sometimes exhaled into the Air with the gross Vapours drawn up by the Sun, and poured down by Rain again on other places. And this multitude of these little *Semina* thus dispersed, assuming in the Spring their natural kinds, give Men occasion to think them *sponte orta*; whereas in truth they do as really arise *ex semine specifico*, as the greater Animals.

And therefore credit is hard given to the Story of *Diodorus Siculus*, or of the Poet out of him, concerning the Mice arising in *Egypt*, out of the Slime of *Nilus*;

Altera pars vivit, manet & pars altera tellus.

Neither to the confident *Helmont*, in his Tract *De Imagine Fermenti impregnante massam Seminis, pag.* 113. who tells us, that if a foul Shirt be put within the mouth of a Vessel where there is Wheat, that in the space of 21 days it will turn the Wheat into Mice; nor that other Relation of his in the same place, that the Herb Basil being bruised, and exposed to the heat of the Sun some days, will breed Scorpions.

And as concerning the productions of Insects out of Vegetables, *viz.* those little Animals that are bred in Flowers and Herbs, there are some that think they are not the natural production of the Vegetables, but that they are the small *Semina* of those Flies that are lodged in the cavities of them; such as are in the Leaves of Elms, or in the Leaves or Fruits of other Herbs or Trees, as in the Oak-apple, the Hasel-nut, and some others.

And

And besides these formal Seeds, the several parts of Insects have also their Seminal Nature in them, and produce often Insects of the same kind: see for this the whole Tract of *Kircher* in his *Mundus subterraneus, lib.* 12. *cap.* 1. *& seqq.* wherein he gives us the Solution of the *ortus spontaneus* of the Barnacles in the *Orcades* and other Parts, by the Eggs of the Sea-Fowls that are driven upon this Shore; and many Instances of the Artificial production of Insects out of the macerated Materials of Worms, Frogs, Locusts, Shell-Fish, Scorpions: whereby it appears that all their Parts are seminal, though not so active and formative as their Formal Seeds are.

2. As to the mediate production of Insects, yet out of the Seminal Natures of others of the same *Species:* Thus out of the *Fimeta* of Horses, Oxen, and Sheep arise *Scarabei* or Beetles, and according to *Kircher, ubi supra*, Bees have their production out of the *Stercus Bovis;* which yet he attributes to those *Moleculæ seminales* deposited in those Flowers whereupon Cows do feed, but not so macerated in the digestion but that they retain their primitive Seminal Nature; though perchance this may be too remote and laborious a reduction, and possibly it were better to be reduced to that which follows, namely, from the *Animal vivum;* upon which account he supposeth, that Ants are *Humanæ urinæ proles.*

3. Therefore the third Original of Insects is from the living Body of another Animal, whose excrementitious parts do naturally breed Insects, as Lice, Fleas, Worms; yea and according to the Author's Observation, there is scarce any noysom Disease in the Body but it breeds Worms: yea and according to a late curious Anatomist, *Kirkringius*, there are scarce any *Viscera* of the Body of Man, but hath many sorts of Worms in it. And the Solution of these Productions seem to be thus:

That the Sensitive Nature being divisible, communicates it self in various degrees unto all that is united to the Body; the Chyle, the Humors, nay the very Excrementitious Parts, the natural Excrements, the Urine, the Hair, the excrementitious Sweat and Evaporations carry along with them the mean and low *Effluvia* of the Sensible Nature or Animal Spirits.

That these *Effluvia*, when they are closed up in any viscous Continent that may contain and keep them together from being presently diffused and wasted, assume the form of an Animal, though not of the same nature, nor worth, nor excellence, nor perfection of the Animal it self that produceth it: for the meanest and basest *Effluvia* of the Animal Soul accompany these mean and base *connexa* of the Animal Body, namely, the foul Humours and Excrements. And hence it is, that those nasty Productions, as Lice, Fleas, *Cimices*, the Worms in the Intestines or Ventricle, nay in the Heart, Liver, Ears and other parts of Men are bred: and from this participation of those baser *Effluvia* of the Animal Spirits, the Hairs of Horses lodged in standing Water will gather life, and the form of an Insect.

4. As the *Animal vivum* thus communicates a Sensible Nature to Insects produced from it, so doth the *Cadaver* or dead Body: Hence come generally Worms, which in the heat of the Sun sometimes turn into Flies; and according to the Tradition of the Ancient and Moderns, Bees grow out of the dead Bodies of Cows, Wasps and Hornets of Horses;

which

which nevertheless some attribute to a *residuum* of those Seminal Particles of the very Insects which these Beasts devour, with the Flowers and Herbs where they are lodged.

And to maintain that general Supposition before insisted upon, That *Viva & sentientia non generantur ex non vivis & sentientibus*; they say, That even in the *Cadaver* there remain certain Animal Spirits, *tanquam in vase*, which serve for the production of Animal Natures of this base and low allay.

And so in all those productions of Insects *ex animale vivo vel cadavere*, the *Semen* of that Insect is a Vital and Animal Principle, though it be not, immediately at least, of the same kind.

And because these Productions are not immediately of the Seminal Particles of the Insect, but of a living nature of another kind, therefore always the *Productum* or Insect is of a different, baser, and more imperfect nature than the Producent.

And this is the Sum of what is observed by *Licetus, de Sponte ortis*, and *Kircherus, ubi supra, viz. Lib.* 12. *Mundi subterranei.*

But yet though much of this be very true, and that Insects are not therefore *sponte nata*, as people think, yea they are never *sponte nata ex non viventibus*; yet I do doubt that it may be found by experience, that some sorts of Insects do arise from Vegetables, at least of a very exalted nature: for the truth is, that some sort of Vegetables seem to be in the next degree to the lowest sort of Insect Animals, as may appear in the Plant called the Sensitive Plant and some others: And therefore it is not impossible but some sort of Insects may arise immediately out of some sort of Vegetables, as the *Gurgulio*, that ariseth in the Wheat; the Wivel, that riseth in the Malt; and the *Hippuris* or Horse-tail, and the *Liburnus* or White Vine, that *Kircher* himself mentions in the same 12th *Book, Sect.* 1. *Cap.* 9. to grow into an Insect in the Water; and those Instances in the same Chapter of *Franciscus Corvinius*, that in every Vegetable had observed a proper Insect bred in it, and living upon it; and the experience of the growing of Moths out of the Seeds of Lavender, and Worms in Rose-Cakes: these experimented Observations seem to correct the universality of the Assertion, that *Non nascuntur Insecta animalia ex non animalibus*; though I think it may be universally true, that they are not produced *ex non viventibus*, they are always the production of the *Semen* or Seminal Particles of an Insect, or of the Parts of an Animal or *Cadaver animalis*, or of that which is or was vegetable.

Yet some there are, that think that these *Insecta animalia* that seem to be produced immediately *ex herbis, stirpibus, arboribus, & vegetabilibus*, or Animals of another kind; yet the first *Seminium* of these *Insecta* are either the *Semina*, or the Seminial Particles of Insects of the same *Species*, percolated through the various parts of Vegetables or Animals: In so much that *Gassendus* that inquisitive Naturalist seems to think, that the very Lice and Fleas and Worms in a Man, are but the Productions of the several Seeds of Animals of the like kind; *Cum in eodem homine ex sordibus capitis Pediculi, ex sordibus barbæ Alæ, inguinis Ricini, ex intercutaneo humore Cyrones oriantur, & ita de cæteris; quonam alio id referamus quam ad diversa semina quæ à diversis sive plantis sive animalibus proliciantur, & sese ad diversas partes quatenus congruunt, recipiant, accommodántve inter nutriendum?*

I do

I do not here take upon me a distinct and exact Discourse touching production of Insects, it is one of the most abstruse, curious, and various Inquiries in Nature: There be many that have busied themselves on purpose in it, to which any one may have recourse, as *Cardanus* in his Book *de Subtilitate*, and *Scaliger* his Animadversions thereupon; *Gassendus in Physicis, sect. 3. l. 4. cap. 1. Kircher. l. 12. sect. 1, & 2. Aldrovandus, per totum; Fortunius Licetus*, his Book *De Ortu Sponte nascentium; Vossius, De Origine Idololat. lib. 4. cap. 65. & seqq.* All that I shall say farther in it, is but this:

First, that it is most certain that many of those productions of Insects which Men ordinarily take to be spontaneous, are yet in truth univocal from Insects of the same *Species*, their formal Seeds or Seminal Particles.

Secondly, that it is not certain that any production of Insects is spontaneous, or not from the Seed of other Animals that were of the same *Species*: for we are not certain, but that the *Seminia* or Seminal Particles of these Insects may be percolated or derived by divers *Maanders* and long obscure passages into or through the Bodies of Vegetables or Animals of another *Species*.

Thirdly, that it is very probable that they are so traduced by these experimental Assays that have been either experimented by Observation, or by Art; whereby it is rendred evident to Sense, that their production at this day may be, and often is of the *Semina* or Seminal Particles of Insects of the same kind.

The Consequence whereof is, That the production of all these little Particles of Sensitive Life, as well as of the greater Animals, though at the first it were *ex non genitis*, by the Power and *Fiat* of Almighty God; yet since that time it may be probable they have their propagations univocal, *Ex semine vel seminio præexistentis Insecti ejusdem speciei, vel formato vel analogo.*

This Consideration may assure us, That the production at least of the generality of Insects which seem to be spontaneous, is truly seminal and univocal; though possibly upon a severe disquisition it may be found, that some are meerly spontaneous and equivocal Productions *ex putri*, whereof I shall give a farther account in something that follows, especially in the next Section.

CAP. V.

If it be supposed that any of those Insects at this day have their Original ex non genitis, *or* spontaneè; *whether yet the same may be said a Natural or Fortuitous Production.*

I Come now to the Second Particular, which is this; That admitting there were any such production of Insects at this day, whether the same were purely Natural: Wherein I shall briefly say,

1. That it seems very probable, that the *Species* of Insects were at first in their first Creation determinate and certain; and although since partly by

by degeneration, partly by various mixtures their *Species* are changed and multiplied, even as the perfect Animals in *Africa* are by a mixture of *Species*, yet they were at first determinate.

2. That it seems the production of the first Insects was like to that of perfect Animals: they were not produced *ex semine*, or *per processum seminalem*, whether *ex Ovo* or *ex Verme*, but were produced in the complement of their specifical and individual existence. For it is much more suitable to Reason, and to the nature of things, that the Animal should have an antecedence to the Seed, and that the *Semen* should be rather the effect of an Animal at first than an efficient; or according to *Plutarch*'s Discourse, that the Hen should be before the Egg, rather than the Egg before the Hen.

3. That yet if we should suppose that in the first production of Insects at least, they should arise *ex præexistente semine*, or that at this day they should arise *de novo*; yet bare Matter were not possibly sufficient for its production, without some Seminal Principle that might determin the Insect to its kind, and advance in it that formation and organization of Parts, and effect those admirable Faculties of Sense and Imagination which we see in them: For it were exceedingly above the bare activity of Elementary qualities, though the most active, as that of Heat, to raise so curious and admirable a Fabrick as the Bodies of those little Animals, much less the Faculties of Life, Sense, and Imagination. And if it were possible that some of the qualities and dispositions, or modifications, or temperament of Matter could arrive to the production of any such little sensible Being; yet it could never be contained, nor contain it self within any determinate *species* or kinds; but as the modifications, temperaments and qualities of Matter are infinite and various; according to its various Mixtures and Combinations, so the Productions would be ever irregular, monstrous, and never colligated or contained in any certain *species*.

It remains therefore that in the first production of Insects, whether at this day, or in the first eduction of their *species*, if they were not produced in the complement of their individual and specifical nature, they must necessarily be produced *ex aliquo semine congruo, & determinante materiam.*

And certainly the Constitution of such a *Semen* is, as I have before observed, a work of great Wisdom, Intelligence, and Power, no way less than such a Power that must have made an Individual of the same kind in his complete existence. For the *Semen* of every thing contains in it the small *Idea* of that Nature which it is to produce; which is as it were minted and stamped upon it, and contains an admirable power of evolving and dilating it self, and bringing forth that admirable Fabrick, and that singular Conformation of Parts, and those wonderful Faculties of Life, Sense, and Imagination, and the several Organs and Operations belonging to it.

Some there are that have said, and with very great truth, That the smallest Animal in the World sets forth the Wisdom and Excellence of the great Architect of the World more conspicuously than the Fabrick of the greatest Whale or Elephant: as the smaller an excellent Watch is (if it have all its parts, motions, order, and constancy) it more sets forth the skill of the Artist than a greater Fabrick. When a Man shall see in

that Animal that well near escapes his sight by reason of its smalness, as the *Acarus*, the *Cyro* or Hand-worm, yet he shall plainly by the help of a Microscope behold in it all the conformation of its little Limbs useful for its being; all the Operations of Senses and Organs thereof; the several Faculties, Offices, and Parts subservient to it; the several *Viscera* that serve for the exercise of Life and Sense, it must needs render the Skill of the Author thereof admirable. But yet again, when possibly the Seminal Principle of this little Animal bears it may be as small a proportion to it as the Insect it self doth to greater Animals, it may be a little imperceptible Egg; and yet in that little Body all the Ideal parts of this Animal and that Principle that immediately conforms the several Faculties and Organs of this little Animal: The Power and Wisdom that conforms such a little *Semen* is no less wonderful, than if it had immediately conformed the *Animal* without the intervention of such a Seminal Particle.

And therefore most certainly the Conformation of these little *Moleculæ seminales*, if any be antecedent to the production of these Insects, is a work of intelligence, choice, election, design, and that of a most wise and intelligent Being; and cannot be the production either meerly of Chance, as the *Epicureans* would have it; nor of that which little differs, namely, an ignorant, unknowing, unelective Principle, for such is barely Nature, unless they that use that denomination mean by it Almighty God.

And when I assert that these *Moleculæ seminales* antecedent to the production of any living or sensible nature, if there be any such, are produced by Almighty God; it is not my meaning, that they are therefore immediately created, or immediately put together or compounded (by the immediate Finger of God) if I may use that Expression to render the sense I intend: But it is sufficient, that the great and supreme intellectual Being having in his infinite Wisdom the Prospect of all things, hath so set and ordered the Motion of Second Causes, to bring together and mingle the constituent Materials of these *Semina*, and he by his Almighty *Fiat* hath annexed to such Compositions, and imprinted upon them the stamp and efficacy of a Seminal Principle; it will be equally the Work of Almighty God if these Compositions be brought together by the Motion and Heat of the Sun, or by the powerful Motion and Determination of various kinds of Ferments; some possibly originally created, and dispersed in the Earth, Air, and Waters; others accidental, arising from the corrupted and mingled Matter of dissolved Animals and Vegetables, whereof I shall in due time, God willing, give a more distinct Account; as if they were immediately created out of nothing: But the Mint, the Stamp, the Signature, the Seminal Efficacy of this *Molecula seminalis* is the Intention, Election, and *Fiat* of the glorious God, and can never be the bare production of a surd unintelligent nature. So that although it should be granted, that the excrescence of those *Insecta animalia* is not at this day from the *Semina insectorum*, but that both in the first production of them in Nature, and the yearly or daily production of them now, they were *ex seminibus, non ex insectis decisis*; yet those *Semina* or *Seminales molecula* were not meerly natural, as Nature imports a surd production of things, but were the Work and Intention of the great and glorious God of Nature.

So

So then we may hereby see what would be purely natural in these *Semina*, what not. 1. It were thus far natural that the material Particles thereof possibly might have an existence in Nature before their Composition; whether these Particles were partly those *Ignei spiritus*, and partly those *Humores primogenii* that were interspersed in Nature, or possibly the constituent Essentials both of the *Semina* themselves and of the Individuals produced by them. Again, 2. They might be thus far natural, that the immediate Instruments of the conjunction of these *Particulæ seminales* might be the Heat, or Influence, or Motion, or Agitation of the Heavenly Bodies, or what other natural Instrument the Divine Power might employ in their Coagmentation. 3. They would be thus far natural, that when these *Particulæ seminales* were conjoyned together, and made up into their *Moleculæ seminales*, and when they had received their Signature, their Energy by the Divine *Fiat*, they would naturally produce their Effect, *viz.* the production of an Insect, when they had obtained a convenient *Menstruum* to lodge it, and the kindly Heat to ripen them; this would be as natural as any Operation of Heat or Cold, or other things are natural; which though they had their first existence by the Supernatural Power and Will of God, yet when they are in their existence they move and act according to that nature which is put into them, which is the Law of their Being, given them by Almighty God.

But the Virtue that gives these *Moleculæ seminales* their Energy of Productiveness, of Life and Sense, their Determination in their several *Species* and Ranks, that mints and stamps them as it were with their *Esse specificum seminale*, is the Institution and *Fiat* of the Divine Will and Ordination.

So that if there be at this day any *Semina* of *Insecta animalia ex non insectis* which gives them their several determinate *species* and natures, though I am not of the mind of *Scotus*, that they have an immediate Creation by God, yet I am not of the mind of *Beregardus*, who thinks they are meerly natural, and made up and put together without the Pre-disposition, Ordination, or Signature of the God of Nature; as the first power communicated to the primogenial natures of Animals and Men, to have a *Vis Seminativa* and *Prolifica* was in the first Creation of Mankind communicated to them by virtue of the Divine Institution and Benediction, though the way of exerting that Power, when produced, was natural.

But possibly much of what is in this Chapter is needless, if in truth the individual natures of Insects were at first created by God, without any pre-existing *Semen* (as we are sufficiently taught, *Gen.* 1. 20, 25.) and that the Seminal and Prolifick Power was given to them as other Animals, and consequently the *Seminia viventium* were subsequent, and not antecedent to the first Institution of the Animal Nature, and an effect thereof.

CAP. VI.

Supposing the Production of Insects were totally spontaneous, equivocal, and ex putrido, *whether any Consequence be thence deducible for the like Production of perfect Animals, but especially of Men.*

IT is true, that Insects, and those equivocal Generations, have an admirable perfection in their kind, not much unlike to those that we find in the more perfect Animals, and indeed they are so much the more admirable, because their little and almost imperceptible *moles* renders their distinction of Faculties and Organs the more curious and artificial.

They have their several Faculties, the Senses of Sight, Hearing, Touch and Taste; they have the digestive, egestive, and other parts of the Nutritive Faculty; and though their individual production may seem equivocal, and of no univocal Seed of the same kind, yet they have the Generative Faculty, and propagate their *species* as well as perfect Animals, and have therein distinction of Sexes, as appears by frequent experience, notwithstanding the doubt or contrary Opinion of *Aristotle*; and although their Phantasie is more lubricous and fickle than perfect Animals, yet it is evident that they have a Phantasie, as appears by their Motions and little Operations; and as they have Phantasie so they have Memory, as appears by the Returns of Bees and Pismires to their homes from great distances: And as they have these Faculties of Life and Sensation, so they have Organs accommodate and admirably fittted to those several Faculties, namely, to Nutrition, Augmentation, Generation, Sense, Local Motion, Phantasie, Appetite, which are so far from being contemptible, in respect of the smallness and petiteness of these little Animals, that indeed in some respect they are the more admirable, as a small Watch is an evidence of greater skill and artifice than a greater, or as a small Picture drawn to the Life commends the skill of the Painter sometimes more than a great Draught. But yet for all this, we must not think that these little Animals are of an equal perfection with the greater and nobler: *Cæsar*'s Image drawn upon a Cherry-stone is a piece of great curiosity, but not of an equal perfection to his lively Statue in Brass, or that a Fly is of an equal perfection with an Eagle. Therefore I shall not fetch Arguments against the like spontaneous Productions of the greater Animals from any contemptible valuation of these smaller, and these little Models of sensible Life; for certainly they are curious and elaborate *automata*, in respect of their admirable minuteness and accuracy: But yet upon other Reasons it seems utterly inconsequential, that because these smaller Particles of sensible Nature may be thus spontaneously produced, therefore these greater Animals may be so; for it is apparent, that in things of an equality of perfection, there is by the Laws and fixed Rules of their several Natures several manners of their productions. If we should compare Vegetables among themselves, some will arise *ex surculo* as well as *ex radice* or *ex semine*, others will not; if we compare Sensible Natures among themselves,

selves, that seem to have an equality of perfection, as some sorts of Brutes and Birds, it will be hard to say which have the perfecter Nature, yet the production of the latter are *ex ovo*, the former *ex verme*; the former oviparous, the latter viviparous in the ordinary course of their natural production; and as at this day the former is not producible *ex Ovo*, so the latter not producible without it. The several natures of things have distinguished them, as in their kinds, so in the manner of their production; and whatsoever the perfection of Insects *sponte orientia* may be, there is no Consequence to be drawn from the same to other more noble Animals.

But again, as there is no Consequence to be drawn from the one to the other, so there is in the very nature of the one kind and the other, and in the natural order of their production a great disparity and disproportion: so that in truth by the very Constitution and Frame of their Natures, the perfect Animals that we see only produced by the conjunction of Sexes and univocal Generation, cannot by any course or consistency in Nature (without the Supposition of Divine Power and Ordination) arise spontaneously: And that appears 1. In the disparity of the natural Productive Principle of the one and the other; 2. In the disparity of the natural Method of the perfecting of the one and the other; 3. In the disparity of the Natures of the Animals of the one kind and the other, having arrived to their complement and perfection.

First, touching the disparity of the natural Productive Principle of the one and the other; although it be admitted that Insects and *spontanè orta*, do or may arise from a *Semen* or Principle that is not univocal or formal; yet it must needs be agreed that the Natural Principle of such their production must be some analogal *Semen*, or some Seminal Principle that is suitable to such a Production, otherwise *quidlibet orietur ex quolibet*; there must be something that must determin the Matter to be an apt *Seminium* for such a Production, or else the Matter must determin it self; either there must be some determinate Vital or Spiritual Principle that is determined in it self, and determins the Matter (which *Paracelsus* seems to hold, that Bodies were first Spirits; and *Aristotle* seems to intimate, when he tells us, that *Animarum omnia plena*, and when the Matter is fitly prepared, there is an illapse of this Vital, Formative, Spirital Principle into it) or else the inherent qualities or dispositions of Matter it self must be of force to mould it self up into these *Moleculæ seminales*, the Formative Principles of these *sponte orta*, (I speak in the Language of those that erroneously hold no higher Principles but such as are purely Natural.) But although such Seminal Particles as these may be sufficient for the production of Insects, yet they are not naturally accommodated for the perfection of the perfect Animals: For the *Semen prolificum* for the production of perfect Animals must receive its specifical conforming Principle, either by the Supernatural Power of Almighty God, or from the Specifical Nature of the Individuals of both Sexes; and if we could suppose an *Anima vaga* of the Sensible Nature, not confined to any Individual of the same nature, nothing could be a Matter fitly prepared for its reception but the *Materia seminalis ex individuis elicita*: neither is there any Matter, *extra compositum animale*, capable to advance it self to the nature of such a perfect Animal; for if either of these could

be

be done, we had as much reaſon daily to expect the like ſpontaneous productions of Horſes and Sheep, as we find of Frogs and Worms.

Again, the *Vis conformatrix* and Seminal Particles of Inſects is moſt plainly in Inſects not confined to the *ſemina formalia utriuſque ſexus commixta*, for we ſee almoſt all their parts are ſeminal, and will by putrefaction advance to the production of their kind: Their productive power is not ſo ſtrictly and ſeverely bound to the *ſemen utriuſque ſexus*: Many have told us by experience and obſervation, that the Excrements of Flies, without any mixtion, will produce immediately Flies; that the Reſolution or Maceration of Frogs and Worms will reproduce Individuals of the ſame *ſpecies*, as *Kercher, lib.* 12. *Mundi ſubterranei*, tells us.

But there are no parts of perfect Animals that are productive of their *ſpecies*, but the ſame is confined by the Laws of their Nature to a *ſemen formale ex utroque ſexu deciſum*. It is true, that their parts corrupted, as their Blood, Fleſh, or Veins, will produce Inſects and living Creatures of a different and baſer kind than themſelves, as Worms, Lice, Fleas, Flies, but they can never advance to the production of their own kind.

And the Reaſon is, becauſe there is not poſſibly any tranſmiſſion of that ſpecifical vital formative Principle to any other part but the *ſemen formale* of the Individuals of that *ſpecies*, and that *Vis formatrix activa vitalis & ſenſibilis* muſt be communicated either by virtue of a participation of all the parts of the Producents, or by a kind of a ſpecifical Idea, naturally produced by that Nature from whence it is derived, which evolves and expands it ſelf being produced, or (which is more intelligible and probable than either of the former) by a participation of the vital and ſenſible Soul to the *ſemen prolificum* from the Producents, and there is no way of communication thereof in perfect Animals, but only to that natural and genuine *Semen* conſtituted, mixed, and ordered according to the Law of its Being; ſo that we cannot ſuppoſe any ſeminal Principle of perfect Animals, but this *ſemen prolificum utriuſque parentis*, unleſs we ſhall *gratis*, and without either Reaſon or Example, wholly invert the natural order of things, and ſubſtitute a *Semen* contrary to the nature of the things that muſt be produced, or admit that which thoſe great Aſſertors of Nature think below them to grant, and will rather ſuppoſe a thouſand Abſurdities than admit, namely, the Interpoſition of the Divine Power.

And 2. As the *Semen formativum* of perfect Animals is greatly differing from that of Inſects, and therefore not capable of a ſpontaneous production as theſe, ſo it is apparent, that at leaſt *in animalibus viviparis* it is impoſſible to be preſerved, *ſine receptaculo naturæ congruo, ſcilicet utero fœmineo*. The vital particles thereof are more fiery and volatile, and higher advanced than that *Semen* that is or may be ſufficient for Inſects, *& ſine convenienti receptaculo avolabunt ſpiritus vitales, & ex interventu vel minimi frigoris mortuum & infœcundum evadet*; but the *Semina* of Inſects are more viſcous and leſs volatile, in ſo much that their *Semina* will remain all the Winter in caverns and holes, and yet be fruitful the next Spring.

3. Again, the *Semen Inſecti* being ſo ſmall a Particle, and having as I may ſay ſo ſmall a portion of Soul in it, is ſoon formed and brought to maturity: We may learn this in their univocal productions, or *ex coitu*.

Scaliger

Scaliger tells us, *Exercitat.* 191. *l.* 2. that the Gloworm brings forth his Eggs *postridiè post coitum*; *Malpighius* in his curious Disquisition touching the Silkworm tells, that *quarto post coitum die* the Female brings forth ordinarily above 300, sometimes above 500 Eggs, and these will lie all the Winter, and with the warm heat of the Spring and some other assistance will prove vital, the next Spring; and *Aristotle*, *Hist. Animal. l.* 5. *cap.* 27. tells us, that *Aranea statim post ova parta incubant, & triduo peragunt, & quatuor septenis diebus justa accipiunt incrementa*; *& ibid. l.* 6. *cap.* 37. tells us, that *Mures si salem lambunt pariunt sine coitu*, and that even their young have been found with young before they saw the light. By all which it is evident, That although these little *Molecula seminales* will retain their fecundity longer than the Eggs of Birds, even a whole Winter, and possibly longer; yet when they have obtained a convenient *Matrix*, and the warm cherishing heat of the Spring, the formation, production, and maturation of Insects, and of that *Semen prolificum* which they univocally yield in their regular production is speedy and hasty; and consequently, that spontaneous Seed by which they may be produced, and the spontaneous production it self is soon dispatcht and perfected, a small portion and continuance of heat and time may perfect the whole process.

But it is otherwise in the perfect Animals, especially in those that are *Vivipara*, a long time is required for their formation and maturation, notwithstanding the great advantage of the place, and heat, and supplies of their formation and support, namely, the *Uterus fœmineus*. Thus the same *Aristotle*, *lib.* 6. *Histor. Animal.* gives us an account, whereof some go above 18 Months, as the Elephant; some 10 Months, as Cows and Mares; some 5 Months, as Sheep and Goats; the least about 2 Months, as Dogs and Wolves: and this is one Reason that *Aristotle*, *Problemat. ubi supra*, gives, why these perfect Animals are not producible *spontaneè*, nor *sine conjunctione maris & fœminæ, vel sine utero fœmineo*. These *Uteri terrestres* fabled by *Lucretius* would never be warm or close enough for the production of those Animals who naturally are producible *in utero fœmineo*, and the intervening Winter would soon make them abortive, especially on either side of the Tropicks, where the heat and cold have their vicissitudes: And therefore it was providently, though fictitiously supposed by *Cisalpinus*, that *Ethiopia* must be the only native Country for such spontaneous productions of the greater Animals and Men.

4. As the Earth was not a fit or competent *Arvum genitale* for viviparous Animals, so the nourishment, increase, and support of these viviparous Animals, *dum in uteris morentur*, according to the very exigence and formation of these *Embryones*, cannot consist with any such spontaneous Productions: for besides the soft and warm *involucra* of the *Chorion* and *Amnios*, we know the very fabrick of their nature hath given them a means and Instrument of Nutrition, *per venam umbilicalem sanguinem maternum attrahentem & dirigentem*: This could never be supplied from any Terrestrial Veins; unless we should suppose that *Succus nutritius* of the Earth to become menstruous, and converted into Blood or other suitable consistence for the nourishment of the *Embryo*, or without any Reason or Experience warranting it, so suppose that some other way of nourishment should be *in Embryonibus terrigenis*.

5. Again,

5. Again, *poſt partum viviparorum, præcipuè generis humani*, it is evident that naturally the *fœtus* is weak, unable to ſupport it ſelf without the ſupplemental helps, care and ſuperintendence of their Dams or Parents: ſome are blind, as Whelps or Kitlins; ſome are deſtitute of thoſe teguments that are neceſſary to defend them againſt the cold, as many kinds of Birds, that ſtand in need of the hovering of their Dams Wings for a conſiderable time after they are hatched, and are utterly unable to provide their own food, but are hourly ſupplied by their Dams, without which they muſt neceſſarily periſh: and generally all viviparous Animals that are of univocal production are for a long time fed by their Dams Milk, without which, or ſome other artificial proviſion ſubminiſtred to them by the help of others, they could not ſupport themſelves after their production; as young Horſes, Dogs, Calves, Lambs: But this is much more conſpicuous in Humane Infants, who from the time of their Birth for many Months can neither go nor ſtand, nor procure their own food, but ſtand in need of the care of others to keep them warm, provide them covering, and preſerve them from being deſtroyed with their own Excrements. But on the other ſide, thoſe ſmall Animals which are ſuppoſed to be ſpontaneouſly produced, ſtand in need of no other means for their preſervation, being produced, but that heat and circumjacent *menſtruum* by or in which they are produced: and although theſe ſpontaneous productions, being produced, ſeem to propagate their *Species* by the coition of their Sexes, yet for the moſt part theſe generated Individuals, Mice excepted, retain ſtill that natural *indoles* to preſerve themſelves, without any other ſupervenient aſſiſtance than what was at firſt ſufficient after their equivocal production; this we daily ſee in the Eggs of Silkworms, of all ſorts of Flies, Caterpillers and Worms, which though in their ſecondary productions by Generation, yet being ripen'd to fœtation by the heat of the Sun, they live upon Leaves and Graſs, and take their food without the care or aſſiſtance of thoſe Parents that produced them; and carry along with them the indication of that Method of Life which might be conſiſtent with the condition of a ſpontaneous production, which is no way competible to the condition of greater Animals after their production.

6. Again, though the Faculties and Organs of a ſenſible as well as a vegetable Life appear in the ſmalleſt Inſects, yet it is but a weak and imperfect Life of Senſation, and very little advanced above the Vegetable Nature. And this appears by very many Inſtances, as namely, in their generation many Inſects do ſeem to ariſe from Vegetables without any other production; and they ſeem to be little elſe but the *Flos vegetabilis naturæ*, the more pure, active, lively *Effluvia* thereof; as the Flies that grow in the little *Veſiculæ* of the Leaves of Elms and Currants, the Worms in the Galls of Oaks and the Burrs of Wild Roſe, the Worms and Flies which grow in the husks of Burrs; yea many times the Parts of Vegetables divided from the Stock will turn into Animals, as the Seeds of Lavander kept a little warm and moiſt, will turn into Moths; the Plant called the Horſe-tail laid into Water, will grow into an Inſect. 2. This alſo appears, that as the ſeveral parts of Vegetables, the Leaves, the Branches as well as the *formatum ſemen*, are ſeminal, and productive of their *Species*; ſo many times the parts of Inſects carry with them a

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Seminal Nature effectual enough to produce their *Species*, as hath been asserted by the Experience of many; which no way happens in perfect Animals. 3. This also appears in the manner of their Life; for we often see in Insects divided each part keeps its motion, as the several parts of Vegetables keep their animation; a Fly or Wasp whose Head is cut off, yet the residue of his Body will live a considerable time; Flies that seem dead either with Water or Cold, and continue so for some considerable time, by the Heat of the Sun or warm Embers will revive and return to Life and Motion; as a Branch torn from a Tree, that hath been severed from it three or four days or more, will resume Life by re-implantation and the Solar Heat: And whereas the Eggs of a perfect Animal, as of Hens, Geese, *&c.* will lose their Animatick Faculties being frozen or concrete with Cold, or being kept two Months or thereabouts: the Seeds of Insects will continue fruitful a whole Winter or more, and possibly as long as the Seed of Corn, Oaks, or other Vegetables; as is apparent in the Eggs of Flies and Silkworms, which though excluded in the last Summer will remain fruitful, and produce the Insect this Spring, and possibly some time after; so that they are in the next degree above Vegetables, and have a nature very analogal to them. But these things are not so in greater Animals of an univocal generation; this also appears in the great disparity of these degrees at least of perfection in the perfect Animal, above that of Insects of a spontaneous production: For though, as before is said, these little Animals have Faculties conformable to the Sensitive Life, so that we may plainly discover, at least in many of them, the Faculties as well as the Organs of Sense, Phantasie, Memory, Common Sense, Appetite, Passion, Local Motion; yet the more perfect and univocal Animals have greater strength and perfection in these Faculties, their Phantasie and Memory more exact, their Appetite more perfect and free; if I may so call it, they are capable of Discipline, which these smaller Animals are not: There is greater variety, complication, and curiosity in the state, frame and order of their Faculties, and a greater distinction and variety of operation in them than in the smaller Pieces of Nature. There are more Wheels, more variety and curiosity in their motions, more variety of ingredients into the Constitution of the *Automata* of the more noble Animals, than in the Insects that are *sponte orta*: so that for the Constitution of their Souls (the Principle of their Faculties and Motions) there is required a more curious, elaborate, and elevated Composition and Fabrick than in these minute Animals. And hence it is, that though it be not only possible but frequent that these Insects and minute Animals may thus spontaneously arise, yet it hath never been known so according to the setled Laws and Order of Nature: It is impossible these greater and nobler Animals can arise spontaneously, nor otherwise naturally than by the mixture of both Sexes, and a *Semen formatum* and *prolificum*, received and united *in utero fœmineo*, and impregnated as it were with that Specifical *Idea* and Formative Power derived from the Parents, and those other accessions which may elaborate, rectifie, and advance the Soul and its Faculties, and the Body and its Organs to their due proportion and perfection. And therefore there is no parity Reason in the production of Insects and perfect Animals, nor any Consequence to be drawn from the spontaneous production of one, to the

like production of the other in any natural courſe, without the intervention of a Supernatural free Cauſe effecting the ſame beſides and out of the road and courſe of Nature. And what may be ſaid upon this account againſt the Conſequence of the ſpontaneous production of other Animals from the ſpontaneous production of Inſects, may with much more advantage be ſaid againſt the Conſequence of the production of Mankind by any natural ſpontaneous production; becauſe the perfection of his nature, and the ſpecifical excellence thereof, doth exceed the greateſt excellence of other Animals far more than the nobleſt Animals exceed the Inſects. And therefore as the ſpontaneous production of theſe Inſects no way concludes the like production naturally poſſible in greater Animals, ſo if it were naturally poſſible, and *de facto* true that the greater Animals themſelves were *ſponte producibilia & producta*, it were not at all concluſive, nor deducible from thence that Mankind were producible naturally upon the like account. The nobleneſs of the ſtructure of the Humane Body, the great curioſity and uſefulneſs of moſt of his Organs, eſpecially of his Tongue and Hand; the curious and uſeful configuration and diſpoſition of his Nerves and Brain, the admirable variety and quickneſs of his Phantaſy, the great retentiveneſs of his Memory, but eſpecially the admirable power of his Intellect, Reaſon and Will give him a far greater ſpecifical perfection above the moſt perfect Brutal Nature, than that hath above the meaneſt Inſects: And therefore certainly, according to the ordinary Obſervations in Nature, and the Rules and Methods obſervable therein, requires the nobleſt and moſt advanced Method to produce it that Nature can afford.

But againſt theſe Reaſons it may be, and is urged, That all theſe Obſervations and Inferences are bottomed upon the ſtate and courſe of Nature, wherein we ſee things are in the ſtate of things already ſetled; but in the firſt production of things it might be otherwiſe, and muſt be otherwiſe, if we admit an Origination of Mankind *ex non genitis*. And though in the ordinary courſe of Nature, as now things are conſtituted, the production of Mankind is *ex ſemine formato ab utroque parente deciſo*, that his nouriſhment is *per venam umbilicalem*, that it cannot be otherwiſe now but *in utero fœmineo*, that the ſtate of Infancy now requires thoſe adventitious helps that are above remembred: Yet in the firſt ſtate of Humane Production all theſe Suppoſitions muſt be laid aſide, as unaccommodate to that ſtate; another Seminal Principle, another method of Nutrition, another ſtate and habit of the *Fœtus*, muſt be and may be ſuppoſed in the firſt production of Mankind than now is to be found in the World, wherein the order of things is ſetled in a regular Method. If it ſhould be ſuppoſed that a Mouſe or a Rat were produced *ex putri*, we cannot ſuppoſe any ſuch *Semen*, or *Vena umbilicalis*, or that it lived upon the Dams Milk; all which are notwithſtanding ſuppoſable and neceſſary, when that equivocal Animal afterward propagates its kind.

I anſwer, That as it is true that Mankind and other Animals had an Original, and an Original in quite another way than now it is, and *ex non genitis*; ſo it is unqueſtionably true, that thoſe Proceſſes, Principles, and Methods which now ſerve in the production of Humane Nature or other perfect Animals, are no way conceptible, or applicable unto the

firſt

first production of Man or Animals. And therefore I must not only grant that these Modes of Production, Nutrition, *&c.* are utterly ineffectual and unapplicable to the first Origination of Humane Nature: But I must suppose quite contrary, that in truth it is impossible they should be the Modes or Order of that first Origination.

But it must be remembred whom it is that I am here contending against, namely, not against those that do, and that truly referr the Origination of Man to the Divine Power and Will, and a Supernatural production: but against them that are the great Venerators of established Nature, that think it below their Gravity and Wisdom to recognize any other Efficient but what they find in Natural Causes and Effects; nor any other Rule of things but what they see, that take their Measures of their Conceptions and Sentiments from what is obvious to Sense, and the common Observation of things as they now appear, and for the most part frame all their Conclusions accordingly. And therefore that which I herein contend for by these Arguments is this, That a Man that duly considers the natures of things, and makes the course of Nature and the Observation thereof to be the Rule and Guide of his Sentiments, though he be drawn by the necessity of Reason, to grant and conclude that Man must needs have an Origination, and that in another way than now he hath, namely *ex non genitis*; yet it is not reasonable for him to conclude that he had this Origination upon a bare natural account, as the Insects and *sponte orta* have, because it quite thwarts and crosses all the appearances of Nature, and is wholly incongruous to the nature of things as they now stand.

And a Man that makes such a Conclusion must needs offer violence to his own Reason and Experience, and depart from those Laws and Rules of Nature, which he makes his Guide, and the Compass by which he steers his Judgment touching things; and suppose that natural which is wholly different from what it seems: And consequently, if the reason and nature of things compel a Man to assert that Mankind had their Origination another way than that in which it now is, the same reason and nature of things duly and impartially considered, must needs evince that it had not its Origination from any either casual or meer natural course of things: But by the Power and Will of a most wise, intelligent, bountiful, free, and powerful Being; who according to his Wisdom and Goodness first gave being to Man, yea and all other things, *secundùm intentionem & beneplacitum suæ voluntatis.* And since it is apparently necessary for any Man that will admit the first production of Mankind to be totally in another Method than now, and since they that will suppose a natural production of Man at first, must necessarily suppose a different production from that which now obtains: And since no more is asserted by those that suppose its Origination by the Will, Power, and Institution of Almighty God; this latter Supposition is much more reasonable and explicable than theirs that suppose the first Origination natural, yet totally different from what now it is, which is the great thing I intend in this long process touching the Origination of Man.

CAP. VII.

Touching the Matter of Fact it self, whether de facto *there hath been any such Origination of Mankind, or of any perfect Animal; either Natural or Casual.*

THis I propounded as a distinct Inquiry at the first, namely, Whether or how far forth we have any Evidence of Fact touching any such casual or natural production of perfect Animals, but especially of Man. But the truth is, that this is but an Appendix to the former Chapter; for if there be any credible Instance of any such Production, all or any reasoning against the possibility thereof is but vain; for what hath been naturally or casually, may be again.

But on the other side, if in all the Successions of the Ages of the World there hath not been any Experience or credible Instance of any such Production; but contrarywise, since Mankind was first upon the Earth, both Mankind and all perfect Animals have had their being by natural Procreation and Generation, by conjunction of Sexes; it is a frenzy for any Man that pretends to Reason, to suppose a natural possibility of that to be either from a casual or meer natural Cause; which never had any Instance of its being or existence in such a manner.

The World hath now upon the shortest Account lasted above 5600 Years, and within the compass of these Ages of the World there have been in many Nations, especially among the *Egyptians* and *Grecians,* Men of great Wisdom and Understanding, and singular Industry to search into the History of Nature, and many of them have had great opportunities to know very much therein: and since their times, especially the generality of the wiser and more inquisitive sort of Men being allarmed by the Writings of those that went before them, have made it their business to search yet farther, and the Learned in all Ages have left the Essays of their Learning, Reason and Observation to succeeding Ages, and if any Prodigy or considerable Production hath happened in their times, they have sent us the News of it: But never in all the Ages of the World since those 5600 Years hath there been any credible Relation either of the casual or natural production of a Horse or a Dog, much less of a Man or a Woman happening within the compass of that time, abating some Poetical Fictions and Fables that have no colour of any Authentick History or Authority: And therefore *Scaliger* well saith, *Exercit.* 193. *Si hos aliquando ex putri ortus, cur post hominum memoriam ex ejusmodi procreatione nullus extitit?* and therefore *Aristotle*, the wisest Pagan Philosopher that ever wrote, and the strictest observer and searcher into Nature, even upon the account of Experience and Reason tells us, *Lib. 3. de Gen. Animal. cap. ult.* that there never hath been, nor can be, according to the Rules of Nature, any such Production; though by way of Supposition that it some times had been, he gives us that *Hypothesis* of it that seemed to him most likely: And upon this very account, and partly because he was not acquainted with the Truths of God, or at least because he was not willing to acknowledge any other Original of things

but

but by Nature, he took up the Opinion of his Predecessor *Ocellus*, touching the Eternity of the World, and of Mankind in it, and so absolved the difficulty of the Manner of the Origination of Mankind by denying it.

And therefore we have no reason to believe any such thing, since we find nothing in any Authentick History of any Man, or perfect Animal, since the first Being of Man upon the Earth hath been thus produced, abating the Fables of Poets touching the production of Men and Women out of Stones, by *Deucalion* and *Pyrrha*, cast over their heads; the Serpents Teeth sowed by *Cadmus*, the production of *Castor* and *Pollux* out of an Egg, and those forlorn Fables of *Beregardus*; of the Green Man found in *England* in the Den of a Wolf 500 years since; the Blew and Red Men of *Rabbi Elcha*, that came out of the Mountains of *Armenia*: And therefore for want of any credible or particular Instances of any such productions, *Cæsalpinus* supposeth, that they are in some unknown Mountains between the Tropicks, where the Heat of the Sun is more constant, fervent, and equable, than in Climates remoter from the *Equinoctial*; though he neither doth, nor can give any Instance of such a production there or elsewhere. To excuse this unexperienced Notion, and the difficulty of assigning any Instance thereof, they allude these ensuing Apologies.

1. That these Productions cannot be but under some notable Conjunction or Position of the Heavenly Bodies, which may be accommodate to such Productions; which Positions or Conjunctions not happening but after vast and distant Revolutions, the Experiment it self can rarely happen; and by length of time, before the like Revolution return, it is forgotten.

2. That those Productions could not be but in Matter excellently prepared and fitted for this production, which could not be but after some great and long continuing Flood or Inundation, that might prepare and dispose the Matter for the Activity of that great Revolution, and if these should not meet together, or in some convenient nearness, the production of Mankind and perfect Animals would be frustrated.

3. That in as much as provident Nature hath had for many Ages, and yet hath a sufficient *Seminium* and stock, for the preservation of the *Species* of Men and perfect Animals raised by propagation and the mutual conjunction of Sexes, Nature is not necessitated to have recourse to this extraordinary way of peopling and furnishing the World, and therefore it cannot be expected but after some vast devastation, that may endanger at least the extinguishing of the *species* of things.

To these things I say first in general, That if Men shall upon such a Method of Arguing go about to establish a Supposition, that neither they nor any else have ever known or experimented, and make a Conclusion of a thing as natural, upon such Suppositions as never any Man knew or heard, to produce such effects, Men may assume any thing to be natural, which yet hath not footsteps in Nature bearing any analogy to it. But to the particulars:

As to the first, it is unreasonable to make such a Supposition, for since it is not possible for any Man to know whether there be any such Influence of the Heavens to effect such productions, unless by Experience and Obser-

Observations of some Men, or some other way the notice thereof were given to Mankind, it being a Matter of Fact, that can no other way be known but by Experience or Revelation; and since the bare beholding of those Heavenly Bodies, being of that distance, can never without Observation of Events give us any natural estimate of their Effects, what they are, or may be; and since it must needs be granted, that such imagined Conjunctions, as may be effectual for such productions, are at vast unknown distances, and such as no Age before hath, or indeed can leave us any Memorial of; it must needs be a vain and precarious assumption, to attribute any natural Efficacy to any Conjunction whatsoever for such a production. The Ancient and Divine Historian *Moses* gives us indeed an account of the Origination of Man, and all other Animals, but not upon any natural causation or activity of the Heavens or Heavenly Bodies; but as he gives us the History of the Things, so he gives us the true Resolution of the Cause, not a natural but a supernatural Cause, namely, the Intention and Volition of the Great and Wise God; and to exclude any imagination of a natural or necessary Cause of these productions, doth not only tell us in expres terms, that the production of them was by the Energy of the Divine *Fiat*, but also that the production even of Vegetables themselves, that seem to have the greatest dependance upon Celestial Influences, was antecedent to the Constitution of those Heavenly Bodies. 1. As the Supposition of such a Natural Causality in the Heavens is meerly precarious, so it seems even to our Sense apparently false; for we see every year, without any other than an ordinary Conjunction by the Access of the Sun, Insects and Plants, *sponte nascentia*, do arise; and we know, that ordinarily in the compass or revolution of 800 or 1000 years, very great and considerable mutations happen in the Position and Conjunction of the Heavenly Bodies; and we know, that within the compass of Authentick History these Revolutions have happened above thrice, and since the latest *Epocha* of the Worlds Inception above five times; yet none of these great Revolutions have for any thing we ever knew or heard produced any one Horse, or Lion, or Wolf, much less any one Man, as a *Terrigena*. And therefore Experience (the best means to settle such an *Hypothesis*) doth not only not warrant it, but is evidently contrary to it, and denies it.

2. As to the second, the *Mosaical* History gives us an account of an Universal Deluge, about 4000 years since, which lay long upon the whole Earth; and the *Grecian* History gives us an account of two very great Floods, namely, the *Ogygian* and the *Deucalian* Floods; and every Year gives us an account of the Inundation of *Nilus* in *Egypt*, a most fruitful Continent, and near the Sun, whereby the Soil is made admirably fruitful; and there is scarce any Age but some great portions of Land are laid dry, by the recess of some parts of the Ocean, which had lain covered for many thousands of years before with the sea. And as the universal Deluge was as great a preparation of the whole Earth, so these particular Inundations and Recesses of the Sea left particular Spots of Land as well prepared for such productions as can well be imagined; and yet in no Age have we any Instance of any such production, abating the Story of the *Egyptian Mice* which concrete after the recess of *Nilus*, which yet of most hands are agreed to be Insects, and *sponte nascentia ex putredine*. Indeed

deed *Beregardus* tells us, *ubi supra*, out of *Camerarius*, that about *Cayro*, after the reflux of *Nilus* there are often seen divers Limbs or Parts of Mens Bodies; whether this be true or no, or if true, whether they are not only relicks of some Bodies swept away by the Inundations of *Nilus* out of their Graves or Sepultures, and torn asunder by the furious Cataracts of *Nilus*, is not clearly evident: But be they what they will, or whether the *Lusus naturæ*, yet they make nothing to this matter, unless *Camerarius* or some other had seen those *divulsa membra* come together, and configured into an humane Shape, and animated with a humane Life, which neither he nor any other have yet affirmed or pretended.

3. As to the Third, I say, 1. If by Nature they intend the great and glorious God, that most wise, intelligent, powerful Being, they do indeed in effect affirm what I have designed to prove, but do not make good their Supposition of such a Natural Cause as they declare in their *Hypothesis*, wherein they mean only that natural connexion and *series* of Causes whereby Natural Effects are naturally produced. And if they intend by Nature that unintelligent *series* or order of Natural Causes, or the blind and determinate Cause of Natural Productions; How comes that Nature to know when and where this necessity of Spontaneous Productions doth happen, or in what proportion, measure, limits or place it is necessary to be done? Such a provisional care requires a knowing and perfectly intelligent Being, that operates *ex cognitione, intentione, & voluntate*; which is not to be affirmed of Agents purely natural, who do therefore act according to a Law of necessity and determination, *non ex consilio & cognitione*. 2. It is plain, that Insects and Vegetables spontaneously produced, are produced every Year, and their production is as natural as the access of the Sun and the constitution of the Earth: These are procured every Year, whether there be any need of them or not, and possibly sometimes in greater numbers than is convenient for this inferior World. And although it be true, that the Divine Power doth intend, or remit, or manage these Productions *secundùm regimen & consilium voluntatis*, yet it is most evident these Productions are ordinary, animal, and natural, without choice or design in inanimate Nature: If therefore these Productions be natural and periodical every Year, why should there not be as well productions of Men or perfect Brutes, if it were purely natural, as well as Frogs and Flies; since the former may be of more use, especially in many desolate places, than always the latter? How many great and vast Islands and Continents are there, especially in *Armenia*, which have no considerable number of Inhabitants, if any at all to people them? In *Ireland* there are great store of Wolves, and so there were anciently in *England*, till they were destroyed by the Industry of the Inhabitants: in *Ireland* their increase is by propagation, without any new production; in *England* they cannot increase by propagation, because here are none: How comes it to pass that Nature doth not produce new Wolves in *England*, as well as Frogs, Adders, Hornets and Wasps? If it be said, that Nature neglects it because they are noxious; as this is to make Nature an intelligent Agent, so it answers not the difficulty: For why doth she then not destroy the *Species* in *Ireland* upon the same account? But this is but a vanity: Nature as well intends the existence of a Wolf as of a Sheep, where the means of its production is

equal,

equal, though Mankind prefer the latter, as more useful to him. If any thing therefore of this deliberative nature be to be found in the voluntary and intentional Regiments of things of this kind, it is to be attributed to the great and supreme Rector of the World, who doth work according to Counsel, Wisdom, and Will.

Upon the whole matter therefore I conclude, That as well by the reason of the thing, and upon true natural congruity, as also *de facto* and upon experimental Observations, Mankind, no nor the perfect Animals are not produced, nor producible by any meer natural Cause, as at this day, or in any Age or Time since their first Creation, otherwise than by a natural production; which is the Truth asserted by the Great *Verulam*, in his 9th Century, *in fine*.

As for the Heathen Opinion, which was, That upon great Mutations of the World perfect Creatures were first ingendred of Concretion, as well as Frogs, Worms and Flies, and such like, we know it to be vain; but if any such thing should be admitted (discoursing according to Sense) it cannot be, except you admit a *Chaos* first, and a commixture of Heaven and Earth: for the Frame of the World once in order, cannot effect it by any Excess or Casualty.

And as thus neither Casualty nor bare Nature cannot originate Mankind or any perfect Animal *ex putri*, so much less can Art. The Chymists tell us, that by re-union of separate Principles of Vegetables they will in a Glass revive a Vegetable of the same *species* at least in figure and effigies; this hath been pretended, but I could never hear any Man speak it that saw it done.

But never was any so mad, except *Paracelsus*, that could ever pretend to make up a Sensible Being, much less the Humane Nature: *Paracelsus* vainly and falsly pretended to the raising of an *Homunculus*, but yet not without the help of those *Naturales genituræ utriusque sexus*; wherein notwithstanding he lyed, as he did in many things else, which he never could effect notwithstanding his vain boasting of his Skill.

Upon the whole Matter therefore I conclude, That the Origination of Mankind, or of the inferior perfect Animals, neither was nor could be the Effect of Humane Art or Skill, as *Paracelsus*; nor of Chance or Casualty, as *Epicurus*; nor of Nature, as *Cardanus*, *Cæsalpinus*, and some other Recreants in Religion and Philosophy: But it was the free, powerful, and wonderful Work of the God of Nature, who made all things by his Power and Wisdom; and having made them, lodged in them and for them that pre-ordained Law of their Creation and Existence, which we commonly call Nature: That Nature indeed is the Law or Rule instituted and implanted by the wise and glorious God in things when made; but in the first Effection of Mankind God Almighty, not Nature, was the Author. As in my Watch, the Law and Rule of its Motion is the Constitution and Position of its Parts by the Hand and Mind of the skilful Artist; but the Author or Efficient of my Watch is the Artist himself, and not that Motion that is as it were the Law or Rule of the Engin.

SECT.

SECT. IV.

CAP. I.

Concerning the laſt Opinion, attributing the Origination of Mankind to the immediate Power and Will of Almighty God.

IN the foregoing Section and Chapters I have performed theſe things: 1. I have removed the Suppoſition of an Eternal Exiſtence of the Humane *Species*, as altogether incredible, and indeed impoſſible. 2. I have eſtabliſhed conſequently this Truth, That the *Species humana* had a beginning; and this I have done principally upon natural Evidence of the incompoſſibility of an Eternal Exiſtence of ſucceſſive Generations. 3. I have conſidered thoſe Evidences of Fact, or Moral Evidences of the Inception of Mankind, and removed ſuch as ſeem more fallible and leſs concludent, and ſubjoined ſuch as ſeem to be of greater weight. 4. Among theſe of the latter ſort, I have conſidered the general Tradition thereof, both of the unlearned and learned part of Mankind, wherein among others I have conſidered the Opinion of thoſe Famous Sects of Philoſophers, the *Platoniſts, Epicureans, Peripateticks,* and *Stoicks.* 5. Though I have made uſe of their common Suffrage, in order to the Proof of the Origination of Mankind, yet I have not allowed all their ſeveral Notions, or *Hypotheſes*, touching the Method or Manner of their admitted Origination of the Humane Nature. And therefore, 6. I having thus eſtabliſhed the *Theſis* in general, I have deſcended to the Examination of the particular *Hypotheſes*, taken up by various Philoſophers, touching the ſame Origination: And thoſe I have diſtributed into theſe three Ranks; 1. Thoſe that ſuppoſe an accidental or caſual Production of Mankind, which was principally the Opinion of the *Epicureans:* This Opinion I have examined, and rejected as vain. 2. Thoſe that ſuppoſe this Production to be Natural, or by the bare Concurrence of Natural Cauſes, as *Avicen*, *Cardan*, and ſome others; which I have likewiſe examined, and rejected as utterly inevident and falſe. 3. There remains therefore the third Opinion, that attributes the Origination of Mankind to the immediate Power and *Beneplacitum* of the Supreme Intellectual Being, namely, Almighty God; and this was the Opinion of divers of the *Platoniſts* and *Stoicks.*

This Opinion is in the general true, and agreeth not only with the Divine Doctrine of *Moſes*, but with the exacteſt Meaſure and Rule of Reaſon, and the Light of Nature it ſelf; and as it is utterly impoſſible, that Mankind ſhould be without a beginning, ſo it is utterly inconceptible, that he ſhould have any other Original but this.

But although this general Suppoſition be thus conſonant to Truth and the Light of Reaſon, yet ſince the Manner of this Origination of Mankind by the Power of God depends meerly upon His own *Bene-*

placitum, which might put forth and exert this Act of His Power, Wisdom, and Goodness, in the production of Mankind according to His good Pleasure, and the *Arbitrium* of His own Will. And since Mankind, having their Existence after this production, could never by his own Sense perceive or understand perfectly the Manner of his own production, and consequently the particular Method or Manner thereof could neither be attained by Humane Experience nor Ratiocination; we must necessarily either be utterly ignorant of the Manner and Order of the Divine Procedure in the Origination of Mankind, or we must know it only by Divine, or at at least Angelical Revelation, and not otherwise. So that though the general *Thesis* of the Origination of Mankind by Almighty God, be a Conclusion deducible by Reason, partly by the remotion of all other means as incompatible and insufficient for such a production, and partly by the observation of the Events and Effects in Nature; yet that this production of Mankind was in this or that particular manner, is a Truth distinctly cognoscible only by Revelation.

And hence it came to pass, that those great Searchers into Truth among the Heathens, being either not acquainted with the History of *Moses*, or not acquainted with the Divine Authority by which it was written, either delivered their *Thesis* generally, that Almighty God produced Mankind by His Power and Will, not explicating the particular manner thereof; or if they attempted a particular Explication of the manner, they ran out into very uncertain, various, and contradictory Explications thereof; which must necessarily be the consequence of such particular determinations, where Man hath not sufficient light to guide and direct him. *Zeno Citicus*, the Founder and Prince of the Sect of the *Stoicks*, a wise and a good Man, contented himself with this general Assertion touching this matter, as it is delivered us by *Censorinus*, *in Die natali, cap. 4. Zenon Citicus Stoicæ sectæ conditor, principium humano generi ex novo mundi constitutum putavit, primosque homines ex solo adminiculo Divini ignis, id est, Dei providentia, genitos.* *Plato*, as far as we can collect his Opinion out of his *Timeus*, attributes the Origination of Mankind to the immediate Causality of an Intelligent Nature: But going further into particulars, falls into conjectures, attributing the Effection of the Soul unto the Great God, but the Fabrication of the Body to the *Dii ex Deo*, or Angels, it seems according to the Tradition of the *Egyptians*. And this hath been ordinarily the unhappiness of Mankind, without the light and guidance of Divine Revelation, that if they have at any time happened upon some sound and substantial Truth, they commonly fix unto it Explications and Additions of their own, which many times, by their inevidence, absurdity, or incongruity, draw in question the Truth it self to which they are appendicated: Therefore to settle, and fix, and quiet the Minds of Men touching their own first Origination, and the Origination of this World, it hath pleased the Divine Wisdom and Goodness by the Hand of *Moses* to reveal unto Mankind, not only that the World and Mankind had their Original, and that they had their Original from Almighty God, as its Efficient both of the Matter and Form thereof; but also he hath therein declared the *Series*, Order, and Method of the production of all Things.

It is true, the two former, namely, That the World had an Inception, and

and had an Inception from God, is a Truth that by the diligent Improvement of natural Light and Reason is attainable; but the Manner and Order of this Effection is, as before is said, discoverable only by Divine Revelation: But yet though the Manner thereof is not discernable barely by the light of Nature or Reason, without the help of Divine Revelation; yet that Method and Manner once revealed, as it stands so revealed to us by *Moses*, carries a very great congruity to Reason; which though it cannot at first discover the Method or Order, yet it cannot choose but suffragate to the reasonableness and convenience thereof, being so discovered.

I shall therefore in what follows do these things; 1. I shall give an Account of that Method of the Formation of all things, and particularly of Mankind, as it is rendred to us by *Moses*. 2. I shall shew the reasonableness and congruity of the Scheme of *Moses* touching the Effection of Mankind, both in the general and particular notion thereof, and the prelation that it justly hath above all other the *Hypotheses* of other Men. 3. I shall deduce from the whole certain evident and necessary Conclusions, against those that deny the Existence and Providence of Almighty God. 4. I shall also deduce some Conclusions evincing the Reasonableness of an intended End for Mankind, or the Design of Almighty God in his Creation, and what may be reasonably concluded touching the same.

CAP. II.

The Mosaical *History touching the production of the World and of Mankind, and the Congruity and Reasonableness of the* Mosaical Hypothesis.

IN that short yet admirable History of the Creation delivered by *Moses* in the first Chapter of *Genesis*, he gives us an exact Account of the Origination both of Mankind and of the whole World, and therein and thereby he resolves all the Doubts and Difficulties which troubled the Heads of the wise and learned Heathen touching the same, and resolves and extricates all those inconveniences and perplexities under which the various *Hypotheses* of the Heathen World infinitely laboured.

1. He resolves us, That the World in that Constitution as now it is, was not Eternal, no not that part to which the Ancients attributed Eternity most, namely, the Heavens; whereby all the Foundations of *Aristotle*, *Ocellus Lucanus*, and others touching the same, and all their subtilties and struglings to support that Eternity, and to deliver themselves from those inconveniences that attended that Supposition are in a few words rendred vain and frivolous.

2. He resolves us, That as the World in its present form and structure was not eternal, so neither was the matter thereof eternal; which troubled *Plato* so much, who though he supposed an inception of the formation of things into their present order, yet could not digest an origination of Matter.

3. He gives us an account, That Time or ſucceſſive Duration was not eternal, but had a beginning; and that Motion, whoſe Meaſure Time was, had a beginning, before which it was not; becauſe no *Mobile* was more ancient than the beginning of Time.

4. He gives us an account of a kind of production that the learned Philoſophers knew not, a production *ex nihilo*, by Creation, by the Almighty God; which breaks and tears in pieces all thoſe petite Axioms and ſuperſtructions thereupon, which they had been long time in weaving, and by which they formed much of their Philoſophical Speculation: As the neceſſity of eternal Matter, becauſe nothing is made of nothing; the neceſſity of eternal Motion, becauſe every Motion muſt have ſome Motion anteceding the nature of poſſibilities; which, and many more being deſumed from Generation as it ſtood in the ſetled courſe of Nature, and fitted and appropriated to it, are no way applicable to the firſt Origination and Production of Being by Creation.

5. He gives us the true Efficient of Being, and the manner of his Operation, namely, Almighty God, a moſt wiſe, intelligent, and free Efficient; and one that in the firſt production of things did not work *per modum naturæ*, or neceſſarily, or as a natural or neceſſary Cauſe, as the Sun produceth Light; but *per modum intentionis, volitionis, & electionis*; for he was before he created his Creation of the World, was in the beginning, namely of Time, and created Nature; but he was before that beginning, namely, without all beginning. But to purſue a little more diſtinctly the order of the Creation of things poſitively, and not barely negatively, the *Moſaical* Hiſtory touching the Creation ſeems to be as followeth.

1. That in the beginning, the firſt *Apex* of Time which began with the Being of Matter, Almighty God created in one indiviſible moment the firſt and common Matter of all this *Mundus aſpectabilis*, the Heaven and Earth. *Verſ.* 1.

2. That in that firſt Creation, and for ſome continuance of time or duration after this common Matter of all things lay indiſtinct and confuſed together, without any order or diſtinction, expreſſed by thoſe words, *Gen.* 1. 2. *And the earth was without form and void, and darkneſs was upon the face of the deep:* And in this common Maſs and *Chaos* were contained the conſtituent Matter of the Celeſtial and Elementary World.

Which ſalves the Diſpute touching the diſparity of the Matter of the Heavenly and Elementary World, which appears here to be the ſame in kind.

3. That this common Matter had theſe deficiencies in it, in and for ſome time after its production.

1. It was without Form and Order:

2. It was without Light:

3. It was without Activity, Life, or Motion: and

4. All that Superficies which it had, bore the greateſt analogy to Water, though in that vaſt Abyſs there was a confuſed mixture of other Matter.

4. That the Spirit of God moved upon the face of this great Abyſs,

[*incu-*

[*incubavit super abyssi faciem:*] What this Spirit of God was, whether the essential Spirit, the Third Person in the Holy Trinity; or whether it were a created Spirit, the Spirit of Nature, or as some will have it, the *Anima mundi*, created by God to digest, inspire, and communicate an active nature to this confused *Moles*, as some earnestly contend; or whether this Spirit of God were any other than the emanation of his Power, I shall not determin: But whatever it was, this Motion of the Spirit upon the face of this Abyss had these great Intentions and Effects upon this confused *Moles:* 1. It derived into it motive Powers or Energies, whereby the parts of it were agitated or moved, or at least rendred more obsequious to the agitation and motion of that active nature which was afterward created, namely, Light or Fire. 2. It did gradually digest and separate its parts, whereby they became more capable of disposition and order, according to their several designed and destined places, positions, and uses. 3. It did transfuse into this stupid, dead, and unactive *Moles* certain activity and vital influence, whereby it did in general affect that which *Aristotle* calls the common Life of Bodies, namely, Motion; and the several parts thereof were impregnated with several kinds of vital influence, varied and diversified according to their several parts and uses: As the gentle heat of the Hen seems to communicate a vital influence to the Egg, only with this difference, that the heat of the Hen seems to excite a pre-existing vital principle in the Egg, rather than to give it: But the incubation of this Spirit of God did not so much excite, as give a new vital power to the several parts of the *Chaos*; as the vital Soul in Nature communicates vitality and activity to the Seminal Particles: And this gives us an account how Activity and active Forms, Powers or Qualities were derived into Matter, namely, not from Matter it self, or such which is meerly unactive and passive; but from another Principle, namely, the vigorous influx of this Spirit that moved upon the face of the Water. Whereby it is apparent that the *Vis*, Vigor, Activity or Energy that is in Natural Bodies and in the Universe, as it came from no other Principle than Matter; so it is an Entity of a distinct nature from Matter or material Substance simply as such, and indeed an Entity of a nobler extraction and nature than bare Matter or material Substance. So that in this Description hitherto containing the first *Stamina* or Rudiments of the Universe, we have 1. The Efficient thereof, Almighty God: 2. The manner of his efficiency herein, namely, Creation *ex non præexistentibus:* 3. The Matter of the Universe thus by Creation produced, the confused *Moles*, containing in it self the Matter of all things: 4. The disposition, or rather indisposition of this Matter, dark, stupid, and unactive: 5. The plastick, formative, digesting Principle that pervaded it, the Spirit of God moving upon the face of the Waters.

——— *Totóque infusa per artus*
Mens agitat molem. ———

The first Rudiments of the World being thus laid, and thus prepared and influenced by the powerful Energy and Incubation of this Spirit of God; this divinely inspired Historian gives us in the next place the next succeeding order of Almighty God, producing and effectually raising

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out of this Matter the greater Integrals of the Univerſe, namely, the Etherial and Elementary Nature. *Verſ.* 3, 4, 5, 6, 7, 8, 9, 10.

As in the order of Reaſon, it was but fit and convenient that the production and influencing of the Matter ſhould precede the diviſion, and diſtribution, and orderly diſpoſing thereof; ſo it was equally reaſonable and convenient, that the greater and more extenſive parts thereof ſhould be firſt laid out and diſpoſed into their ſeveral ſtations and orders, before the ſmaller and leſſer portions of Nature ſhould be either produced or ſetled; and that the ſimple parts of this great *Chaos* ſhould be firſt extracted, before the mixed and compounded Exiſtences ſhould be ſetled. For as the *Chaos* and common Lump of Matter was as it were the firſt Matter of all things, ſo the more ſimple and uncompounded parts thereof, the Etherial and Elementary Natures were as it were the *Materia ſecunda*, or *proxima* of the enſuing Productions; and in conformity to this firſt Divine Ordination of things, the inſtituted nature of Corporeal Beings, he did obſerve the ſame method or order ſtill in the Generation of things. Wherein we may obſerve, that the greater and more comprehenſive Rudiments and *Stamina* are laid, and in ſome good meaſure formed, before the leſſer and derivative parts are formed and compleated; as we ſhall have occaſion to obſerve when we come to conſider the *proceſſus generationis* of Man and Brutes.

And now to come to thoſe greater Productions, which are principally theſe; the Light, the *Æther*, the Air, the Water, the Earth. Firſt therefore touching the Light, *Verſ.* 3. *And God ſaid, let there be light, and there was light; and God divided the light from the darkneſs, and the light he called day, and the darkneſs he called night: and the evening and the morning were the firſt day.*

Herein it might be fit to examin, 1. What this Light was: 2. How it was produced: 3. How it was diſpoſed or ordered: 4. In what order and character of time it was ſo produced and ordered.

Touching theſe briefly, and firſt touching the nature of this Light. We may obſerve in Fire two great operations or effects, firſt, Heat, ſecondly, Light: It ſhould ſeem that active Element, as it is commonly called, or rather, that powerful, vigorous Entity, or *Vis ignea lucida & calefactiva* was produced by the Incubation of the Spirit of God upon the face of the Abyſs, and diffuſed through the confuſed Particles of the *Materia Chaotica*; and that it was the great Inſtrument which that Spirit did both communicate and uſe for the preparation, digeſtion, and agitation of that Matter: but this fiery nature being mingled and diſperſed through the Matter, though it had one of its uſeful effects, namely, Heat; yet it neither had nor could have Light, at leaſt till it were in ſome meaſure diſintangled and ſevered from the *Moles* of groſs Matter, with which it was confounded and mingled; and till the lucid and flammeous particles, or rather *Vis ignea & lucida* were lodged in a fit Vehicle for its emiſſion. So that in the work of this day Light was not created, but only a conſiderable part thereof ſeparated from the groſſer Matter, and diſpoſed into an apt Vehicle to contain it. 2. And this anſwers partly the ſecond Inquiry, namely, How it was produced: not, as it ſeems, by Creation; but the powerful *Fiat* of Almighty God called the Light out of Darkneſs, that is, ſeparated and ſevered the moſt lucid fiery

fiery nature, and inveſted them with fit Vehicles deſumed out of the *Materia Chaotica*, whereby great part of that flammeous and lucid fiery nature which was created by the Incubation of the Spirit of God, was in a great meaſure diſcharged from the bond and incumbrance of the groſſer Matter, and rendred uſeful for the beauty and ſervice of the Univerſe; but yet ſo, that there remained ſtill in the parts of the *Moles* a ſufficient ſtock of connatural Fire and fiery Particles for the heating, agitating, and digeſting of their ſeveral parts for their ſeveral uſes and ends. As to the Third, it ſhould ſeem, that 1. This luminous nature was lodged in a ſuitable Vehicle to derive its Light and Influence to the exteriour Superficies of this *Moles Chaotica*. 2. That it was put into a circular Motion, whereby in the ſpace of a Natural Day it viſited the whole *Expanſum* by ſucceſſive rotation; ſo that as by its preſence in any part of the Chaotical Horizon it made Day, ſo by its abſence there-from it cauſed Night, as the Sun doth at this day. And this diurnal Rotation of this luminous Body was really ſuch, becauſe there could not be otherwiſe that which the Text ſuppoſeth, *viz.* ſeparation of the Light from the Darkneſs, and thereby the diſtribution of Day and Night; ſo it was convenient, for the better digeſtion and preparation of the remaining indigeſted parts of Nature. For doubtleſs that Light was of a very great and penetrating Influence, being as it were the *Flos* and Elixir of that moſt active and powerful Element. 4. The Time and Order wherein this production of Light was, is ſaid to be the firſt Day: what portion of duration the diſorderly *Chaos* had before this firſt production is utterly uncertain, becauſe not revealed; poſſibly it might be a very long time, but the perfecting of the World in its formal order and *conſtitutum* ſeems to be in the compaſs of ſix Natural Days, and the firſt Days Work is this of Light.

And although we muſt finally reſolve the ordering and methodizing of all things to the *Divinum beneplacitum*, whoſe Wiſdom and Ways are unſearchable and paſt finding out, farther than he is pleaſed to reveal them; yet it ſhould ſeem to be very conſonant to the reaſon of things, that this eduction and circulation of the Light ſhould begin and be continued at leaſt for the firſt three Days of the World, without parcelling or diſtributing into thoſe Luminaries of the Sun and Stars: For doubtleſs the collection of this lucid, fiery, active nature into ſo great a Body as probably it was, had even naturally a moſt forcible energy, influence and penetration into the ſubjected *Chaos*, and ſtrangely prepared it for its enſuing offices and uſes. Although we muſt ever with all humility acknowledge, that the Great and Omnipotent God needed not the ſubſidiary Inſtrumentalities of Nature to compleat his Work, but could do all things immediately, as he did moſt evidently in many of the productions of Nature, yet if he were pleaſed to uſe this order in things, we have reaſon to believe, that though he needed it not, yet when we ſee it done, it was certainly ſo done with moſt exquiſite Wiſdom and Reaſon: He could in the firſt moment have produced the whole World compleat in all particulars, but he choſe not ſo to do, but did things in a ſucceſſive order of ſix Days, and in ſuch a Method as was moſt agreeable to his good pleaſure and infinite Wiſdom. What became of this Fiery Luminous Nature and Body, we ſhall ſee in the fourth Days Work.

2. The

2. The Second great Integral seems to be that great and vast Body, consisting of the Air and *Æther*, called the Firmament; *Vers. 6. And God said, Let there be a firmament in the midst of the water, and God made the firmament, and divided the waters which are above the firmament from the waters that are under the firmament, and it was so; and God called the firmament heaven: and the evening and the morning were the second day.*

This word that is translated in our *English* [Firmament] is rendred by Linguists understanding the propriety of the word, to be *Expansum* or *Expansio*; and much controversie hath been, what is meant by the Waters above the Heavens; some supposing a real existence of Waters above the Starry Heavens, to cool the heat contracted by them or their rapid motion; others conjecturing it to be the Clouds, which are above the middle region of the Air: both improbable enough, the former a meer imagination, the latter little more; for, at this time, it is apparent there were no Clouds, neither had it rained upon the Earth. *Gen. 2. 6.*

It seems therefore that this *Expansum*, rendred here Firmament, is nothing else but that limit or boundary between the more refined, liquid nature which we usually call Air and *Æther*, and the grosser or fluid Element properly called Water. So the Firmament was nothing else but that *Expansum* of Air and *Æther* that are contiguous to the Superficies of the Water. The Reasons that induce me so to think (which also explicate the Notion of the Supposition) are these:

1. Because frequently both in the Language of the Holy Scripture, and of divers of the ancient Heathen Authors, the whole *Diaphanum* of the Air and *Æther* is in one common appellation called Heaven; which is the denomination here given to this *Expansum*, (God called the Firmament or *Expansum*, Heaven:) thus we have frequent mention of the Fowls of the Heavens, the Clouds of Heaven, which yet are situated in that part of Heaven, which is the Aiery Region. And again here, *Vers.* 14. the Sun and Moon are said to be great Lights placed in the Firmament of the Heaven, which are yet placed in a Region of the *Æther*, though above the Atmosphere and the region of the common Air, yet are far below that liquid region of the *Æther* wherein the Stars move: and *Vers.* 20. the Fowls habitation is said to be in the open Firmament of Heaven, which yet fly no higher than the lower region of the Air. So that the Heaven, and the *Expansum* here called the Heaven, seems to be that great *Expansum* of the *Diaphanum* including the more sublime and pure part thereof called the *Æther*; and the grosser and lower part thereof called the Air, and the Waters above the Firmament were that refined, rarified, liquid Matter, which was *Æther* and Air; and the the Waters below the Firmament were those gross and fluid parts of Nature called ordinarily Water.

2. Because it appears, *Vers. 9.* that the Waters which were gathered together in the Constitution of the Air, were the Waters under the Heavens, Waters that were next contiguous to that common *Expansum* consisting of Air and *Æther* called Heaven, there was nothing interposed between that fluid Water which constituted the Sea, and that common *Expansum* called Heaven, consisting of Air and *Æther*.

3. It seems that the great *Moles Chaotica* was in its appearance and external consistency of a wateriſh nature; for it is said that the Spirit of God

God moved upon the face of the Waters, which though it contained the confused Mass of all things, as well those that grew into a more solid consistence, as the more reformed or subtil Matter; yet in its first deformed exhibition of its appearance it had the shape of Water, and therefore *Plutarch, de placitis Philosopharum, lib. 1. cap. 3.* tells us, that *Thales Milesius* held that Water was the common Principle of all things; which Position he learned partly by the Analogy that he found therewith in things existing, whose first Rudiments and last Resolution seems to be a watry or fluid substance; and partly by Tradition from the *Egyptians*, or rather from the *Hebrews*, whose first habitation was in that Country.

And the manner of the resolution of this Aqueous appearance into *Æther* and Air seems to be this: This great aqueous Chaotical Mass contained in it Particles of various natures, some more feculent and gross, as the Earthy Particles, which floated up and down in it till they were driven down by the Fire and Heat, or otherwise by some disposition or or agitation of that Incubation of the Spirit of God, were disposed and subsided in the middle of this Aqueous substance, which became in time the *Moles terrestris*: Other parts less feculent than these resided in a Region or Circle next to that grosser and more feculent Sediment; but by virtue of the Divine Disposal the Incubation of the Spirit and the Energy and Efficacy of that great circulating Fiery Nature, which was maintained in a continued rotation about the *Massa Chaotica*, called Light; and that internal, hot, and fiery Nature that still resided within the Body of the *Massa Chaotica*, the more subtil and pure particles of this Watrish Matter were separated, divided, and exhaled from it, and constituted that Consistency that is called the Air and *Æther*, here called Heaven.

And this diaphanous Body of the Air and *Æther* thus extracted from the Water varied in degrees of Subtilty or Rarity, according to the degrees of its elevation; the more high and elevated parts being more pure, according to the degrees of their ascent; and the lower more feculent and thick, and filled with more gross Exhalations and Vapours arising from the contiguously subjected parts; and therefore it is said, *Gen. 2. 6. There went up a mist from the earth, and watered the face of the ground.*

And I am farther induced to think, that those Waters above the Firmament or *Expansum* were no other than this *Æther* and Air raised and separated from the *Massa Chaotica*, upon these Reasons; 1. Because there seems to be a great congruity between the Water and the Air, in their quality of liquidity or moisture. 2. Because there seems to be a more connatural Transmutation of either into other; the Air, and for ought I know, the *Æther*, which is but a purer sublimated Air, by condensation easily re-assuming the nature of Water, and the Water by heat and rarefaction easily assuming the nature of Air, and by the continuance and constancy of that heat containing it self in that consistency. And from hence it is that the Waters were the common material Principle of both the Fishes and Fowls. And if we may conjecture, that great Inundation, *Gen. 7. 1.* was not by a new Creation of Water, but by the wonderful and powerful Condensation of the Region of the Air; which seems to be that opening of the Windows of Heaven, whereby great portions of the Aerial and

Etherial Matter discovered themselves to be Water. 3. Because we have no other part of Holy History that gives us an account of the production of that vast Continent of the Air and *Æther* out of the Chaotick Mass but this place. And here we must observe once for all, That there was no Creation of Matter after the Beginning; it was all created in that moment of Beginning. 2. That from that Creation till the first Day, wherein Light was produced, there was that continued preparation, impregnation, dispostion, and agitation of Matter by the Spirit of God. 3. That all the Productions of the Six Days (except the Creation of the Soul of Man, and Angels) were not by any new Creation, but by separation of the parts of that pre-existing Matter, formation of them, and composition and effection of Beings out of the first created, disposed, and ordered Matter, by the Power of Almighty God, and the influencing them with those active Principles which we usually call Forms, Energies, and Active Qualities.

3. The Third great Integral of this lower World, especially in the Work of the third day, was the dividing of the Earth and Waters, *Vers.* 9. *And God said, Let the waters under the heaven be gathered together, and let the dry land appear, and it was so; and God called the dry land earth, and the gathering together of the waters he called seas.*

The Divine Historian herein brings us to the Formation of this lower Globe of Water and Earth, and the distinction thereof.

This portion of the lower World seems to be the whole residue of the visible Chaotical Mass, which by the former Rectification was reduced to a small portion, like the *Caput mortuum* after Distillation; for out of it had been before drawn those two mighty and large portions of Matter, namely, the Fiery, and Flammeous, and Lucid Nature imbodied in a Vehicle sufficient to contain and receive it in the Work of the first day; and secondly, the *Expansum*, the vast Body of the Air and *Æther* in the Work of the second Day.

So that this Elementary portion of Earth and Water seems to be as it were the sediment and relique of the *Massa Chaotica.*

And those other two vast Extractions being drawn from it, it seems this lower Region of Nature consisting of an aggregation of Water and Earth by the Divine Disposition of things, either immediately, or partly by the instrumentality either of the ambient Fire, or by the implanted tendency of the grosser Particles to one common Center of this residue of a Chaotick Mass, the gros Terrestrial parts subsided into the middle of the Water; and though it was in bulk far greater than the Water, yet it had there two concomitants with it: 1. The Water by reason of its fluidity and penetration mingled it self, as far as it could at least, with the superficies of the Terrestrial Sediment, to some considerable depth into it, so far as it could pierce, until it were excluded by the denser coagulation of the Earth. 2. The Water did encompass the whole Terrestrial Globe to some proportionable depth or thickness, though not equal to the quantity of the Earth. So that as the circular Scales of a Pearl incompass one another, so did the several extrracted great Integrals cover one another.

The first extracted Nature was the Light, the Fiery or Luminous Body; which must needs be uppermost, because first drawn off from the Chaotick Mass.

Mass. The second, the *Æther* and Air drawn off, encompassing the remaining part of the Chaotick Mass. The third, the Watry Consistence, left in a circular subsistence by the subsiding of the Ball of Earth into the common Center of the Universe.

And by this means the Earth was not at all conspicuous, but involved in an *involucrum* of Water; so that it must necessarily be, 1. That hereby the whole Superficies of the Earth was covered with Water. 2. That the upper part of it must needs be a moist muddy substance, fluid and lubricous, like Slime or Mud.

The appearance therefore of the dry Land was by the excavation of certain *Sinus* and Tracts of the Earth, and exaggerating or lifting up other parts of the Terrestrial Matter; and by this means the Water subsided into those Caverns aad Valleys prepared for its reception: Whether this excavation of the Terrestrial Body, or elevation of other parts thereof whereby the Water subsided, were immediately by the immediate Power of God; or whether he did it by the instrumentality of the Water, working room for it self in the more soft and penetrable part of the Earth, and exaggerating and raising Islands and Continents in other parts by such exaggeration; as we see is done at this day by the Ocean, producing Islands, and enlarging Continents: Or whether by the instrumentality of the Fire, either subterraneous or ambient, raising up the Earth, or what other immediate way it was done; most certainly it was done by the Will, Direction, and Regiment of the Divine Wisdom and Power: so that it is truly said, *Job* 38. 10. *He brake up for it its decreed place: Prov.* 8. 28. *He gave the sea its decree, that the waters should not pass his commandment.*

Hitherto the Divine History hath given us an account, 1. Of the *Materia prima* of all Corporeal Beings, the *Massa Chaotica*: 2. The *Materia proxima* or *secunda* of all other Corporeal Beings being the simple Elements, and the next Matter of all Mixtions or Composition: 3. The *Natura ignea*; calefactive, lucid, and penetrating the Elementary Matter: 4. The *Natura ætherea* and *aerea*, the *Expansum*: 5. The *Natura aquea*, or the Water: 6. The *Natura terrestris*, or the Earth. And then he proceeds to those mixed or compounded Natures, drawn out of those or some of those simpler Existences, the Furniture of the Earth and Heaven.

I shall therefore now proceed to his Description of the Production of Mixt Natures and Vegetables, in part of the third day; Celestial Bodies in the fourth day; Fish and Fowls in the fifth day; Brutes and Man in the sixth day.

1. Therefore touching the production of Vegetables, *Vers.* 11. *And God said, Let the earth bring forth grass, the herb yielding seed, and the fruit-tree yielding fruit after her kind, whose seed is in it self upon the earth; and it was so.*

Here we have the beginning of the Vegetable Nature; and mark, what I say concerning this, will be applicable with some variation to the Brutes and Fish. We have three sorts of Vegetables here described, 1. Some that seem to be of the lowest rank, and such as we do find oftentimes *sponte orta*, the Grass. 2. Those Herbs that are of a more perfect nature, which as they bear Seed, so they do not usually arise but by it. 3. Trees bearing Fruit and Seed, being the nobler sort of Trees;

but this includes all kind of Vegetables, as well Trees that bear not Fruit or Seed, as those which do.

In the production of these Vegetables, these things are observable:

1. The Supreme Efficient, the Word of Command of the Divine Will was that which was the Supreme productive Efficient.

2. The subordinate Instrument [*germinet terra*] wherein we have these two great Truths delivered. 1. That the Earth yielded the Matter of Vegetables. 2. That the Earth was now impregnated to be an active Instrument to this production, and concurred therein, at least instrumentally, with the Supreme Efficient, and that Activity that was in the Earth did not arise meerly from the Matter, for that in the beginning was purely passive, but 1. by the Fecundating Principle, the Spirit of God moving upon the Face of the Chaotick Matter; 2. by the powerful Energy of the Fiery and Luminous Principle, that partly resided in the Earth, partly incompassed it; 3. but principally by the Efficacy of the Word of the Divine Command, which was no other but the determination of His Efficacious Will.

3. But though the more solid Matter of these Vegetable Productions was the Earth, yet it was the Earth conjoined with that vigorous Fire, which was mingled with that active Air or *Æther* that was interspersed in it, and that fruitful Water which remained conjoined with it.

4. That this Production was not by any formed antecedent Seed dispersed in it, but immediately, the Vegetable Individuals were antecedent to any *Semina* that might be productive of it; and according to the true Method of Existence of Things in their first Origination, the Herb and Tree were the Cause, the Original of the Seed, the Seed was not the Original of the Herb or Tree, though in the secondary production by generation the *Semen* precedes the thing generated, according to the Order settled after the first production of things, which doth reasonably solve the Dispute of *Plutarch*, Whether the Hen were before the Egg, or the Egg before the Hen?

And as the Supposition, that the first Principle in the Origination, either of Vegetables or Sensitives, to be *ex præexistente semine* seems incongruous and unreasonable, I mean as to perfect Vegetables or Animals, so it is idle and needless: For certainly the same Infinite Power, that could form a *Semen univocum*, to be the immediate Principle of an Animal or Vegetable, in the primordial Origination of them, could with equal facility form perfect Individuals of the several *Species*, and endue them with a prolifick power of propagation of their kinds, by seminal Principles deciſed from them; and no lesser Power and Wisdom was required to mold up a specifical operative *Semen*, than to frame the Individual or *Species* to be produced by it.

5. The Supreme Power of the Great Efficient of Vegetables, as well as Animals, was seen in this, in that it determined their *Species*, which, Matter alone, nor any Universal Cause purely natural, could never have done, in respect of their universal common indeterminate Nature, which could never fix nor settle in any determinate specifick production. Therefore, in that the Individuals of Vegetables, Fish, Fruits, and Birds, as well as Men, were made after their kinds, it ascertains us, that this Origination of things was by a Wise, Free, Intelligent Being, full

of

of Power and Wisdom, acting *secundum intentionem electionem, & voluntatem.*

6. By virtue of this Divine Intention, Ordination, and Command, these three things were settled touching Vegetable Natures, (which is also true concerning Animals, as to the two latter of them at least) 1. The Earth was endued with prolifick vital Energy, whereby it was enabled with the vigorous assistance of the Fiery Nature included in it, and accompanying it, to put out many spontaneous productions of some ordinary Vegetables, and probably of some Insects, and to exhibit a *succus nutritionis* to support all kind of Vegetables and many Animals in their vital existence, 2. The Individuals of Vegetables of all sorts, as also of Animals, Fishes, Fowls, Insects, and Man, were in a moment of time produced in their full and perfect complement, laden with their Fruit and Seed, without ruining the natural gradual process of Maturation, which was to ensue in the course of future Generations; and this could not be done, either by force of any natural fecundity that was then in the Earth, or the bare strength of the formed natural accommodation of Light or Heat; for though it be true, that the natural fecundity and heat of some Climates, and also artificial fecundations of Matter, may conduce much to the acceleration of Maturity, yet it is not imaginable, that these could be ripened into the full growth and burden of Fruit in the period of a Day, but by virtue of a supernatural Efficient and Power, namely, the Energy of the Divine Command, [*Germinet terra, &c.*] 3. The third admirable Demonstration of the Immediateness of the Divine Power, Wisdom, and Ordination, is this, That Vegetables, as also Animals and Mankind, were endued with a Power, Faculty, and a certain Law fixed and radicated in them, to transmit their specifical Nature to succeeding Individuals by propagation and seminal traduction, whereby their *Species* might be preserved, and this was done by force of the Divine Institution and Benediction; the Vegetables were produced with their various *Semina* in them, ready formed for their several specifical productions, in their full and perfect stature, *quasi per saltum*, and endued with a prolifick power of multiplication of their kind, by virtue of that Soveraign Institution and Commission [*Be fruitful and multiply, and replenish the Earth,*] *Gen.* 1. 22, 28.

2. I come now to the Fourth Days Work, *Verse* 14, 15, 16, [*And God made two great Lights, the greater Light to rule the Day, and the lesser to rule the Night, and he made the Stars also.*] It is true what I before observed, that first Matter of all things corporeal was made, and this only was properly Creation or making out of nothing, and all corporeal things, that were made within the compass of the Six Days, was Creation only *per analogiam*, for it was only separation and distribution of that Matter which before existed in the *Materia Chaotica*, or else an elevation or rectification of some parts of that Matter, or a composition out of it or of some parts of it; it was *effectio* or *creatio secunda*, not *creatio prima*; and though the Word [*Create*] be applied to some things that were thus effected, as *Vers.* 21. yet it is not purely *creatio prima*, or *ex nihilo*, but *creatio secunda ex præexistente materia.*

Now, What was the Matter of these Heavenly Bodies, the Sun, the Moon, the Stars, for in this Fourth Day all the Matter of the *Chaos* was before

before distributed into these four Simpler Natures, Light or Fire, Air or *Æther*, Water, and Earth?

The first Matter of these Heavenly Luminaries therefore was the common *Chaotica materia*; but the *Materia proxima* out of which they seem to be constituted, were principally those two great Natures which were separated from the *Chaos* the first day, *viz.* The Fiery Nature imbodied in a suitable Vehicle, and the second day the *Æther* or Aery part: these two great Integrals of the first Universe were far greater than all the rest of the Chaotick Matter, and therefore might very well subminister the principal and predominant Matter for those great and vast Luminaries the fixed Stars, the most whereof are far greater than the Globe of Earth and Water: But to the Constitution of the Planetary Bodies, which seem to be more gross than the Stars, there was a greater proportion of more gross and feculent Matter added to the Fiery and Aerial Particles in their coagulation, though in some of them more, in some less, according to the various degrees of subtilty and grosness of their constitution.

And these goodly Bodies being formed and molded, it should seem that that great and mighty flaming Light which was made or produced the first day; and for the two ensuing days had rolled about the rest of the Chaotick Mass, was by the Glorious God distributed into those several Heavenly Vessels of the Sun and Stars, who succeeded unto, and as it were inherited that primitive Light now divided among them, according to their several measures and uses.

For although the Almighty Wisdom and Power could have made all this Fabrick of the World in its full complement and perfection in one moment, and although he produced and perfected Vegetables, Brutes, and Man in one moment, without the gradual procedures through those several stations and degrees which Nature now observeth; and so he could have done in the production of all other the Integrals of the Universe; yet he seems in some parts of this *Processus formativus* of the Universe to use sometimes such Methods, Means, and Instruments, and such Times, Periods, and Orders as might seem to bear in some measure a congruity to a Natural Procedure; thus he used that Motion or Agitation of the Spirit for the ripening and influencing of the vast Mass; he first begins with the production of those more simple constituent Particles of Matter which might yield Matter suited and prepared to Mixt Natures.

And it is not unreasonable for us to think that this great flaming Light in the first three days of the Creation was used as a most suitable Instrument for the Rarefaction, Digestion, Separation, and Distribution of the remaining part of the Chaotical Matter in those greater Agitations that it had in the production of the *Æther*, the separation of the Water, and the arefaction of the Earth; which Processes required a more severe and violent, active Instrument than was necessary, or indeed suitable to those smaller Mutations which were after made; and probably if that piercing and great Lucid Nature had continued its Revolutions about the World, it would have been too strong and violent either to the production, or conservation of those Animals and Mankind that were now to be produced.

And

And so the diffused Light that circulated about the Universe, is now this fourth day distributed into these several Heavenly Bodies; 1. Because now its use in that former state and method of its existence ceased. 2. It was now for the use of the Universe to have it distributed and ordered into those several Vessels, the Sun and Stars, that might with a gentler and better regulated Heat and Motion influence the World. 3. It was now more for the Beauty, Order, and Ornament of the Universe, for the Glory and Honour of the Divine Wisdom, Power, and Goodness to distribute this Light into several Vessels, and according to various measures and proportions, and accommodated with several Motions; than to keep it in one vast and terrible Body circulating the Universe, which unrefracted might have been too penetrating and violent to the other parts of Nature.

And this seems to be the Method of the Origination of the Heavenly Bodies: For though the first Verse tells us, that *In the beginning God made the heavens and the earth*, we have no reason to suppose that the Etherial Bodies and the Heavenly Luminaries were completed in the moment of Time, (whatever may be conjectured touching the *Cœlum Empyræum*;) for it is evident that Light the first-born of the Universe was not made till the first day; the *Expansum* or *Æther* till the second day; nor the Heavenly Host, the Planetary and Fixed Stars till the fourth day.

I shall not here contend much touching the System of the Universe, whether the Earth be the Center thereof, or the Sun, whether it consist of so many several Systems or *Vortices*, whether every Fixed Star hath its *Vortex*, and the Sun the Center of the Planetary *Vortex*; only thus much I shall say, 1. That this Divine *Hypothesis* delivered to us by the hand of *Moses* seems wholly to contradict the Supposition of Solid Orbs, and strongly concludes that the Heavenly Bodies are moved *in liquido Æthere*. 2. It seems rather to countenance that System of the Universe that supposeth the Earth to be the common Center thereof, than the the imaginary *Hypothesis* of *Copernicus*, *Galileus*, *Kepler*, or *Des Cartes*. 3. That it utterly contradicts the *Hypothesis* of *Aristotle* and *Ocellus*, and the *Pythagoreans* touching the Eternity of the World, or of the Heavens; and likewise the Fiction of *Democritus* and *Epicurus* of the casual Coalition of the Universe by the motion or interfering of Atoms.

3. I come to consider of the Fifth Days Work, touching the production of Fish and Fowls; *Vers.* 20. *And God said, Let the waters bring forth abundantly the moving creature that hath life, and fowl that may fly above the earth in the open firmament of heaven; and God created great whales, and every living creature that moveth, which the waters brought forth abundantly after their kind and every winged fowl after its kind; and God saw that it was good.*

The great Engin of the Heavenly Bodies being now constituted in that excellent state and order for the use and conservation of animal Life, God Almighty proceedeth in a most exquisite order for the production of Animals; and because the Waters were in themselves a more ductile, and possibly a more fertil Body than the Earth; and also, because *cæteris paribus*, the Fowls and Fishes are not of an equal perfection in their natures to the Brutes or Terrestrial Animals; for these have certainly a more digested constitution, greater variety and curiosity in their bodily texture,

texture, and a higher Spirit and Soul, of nobler Inſtincts, and more capable of Diſcipline than the Fowl or Fiſhes. Therefore, as the production of Vegetables anteceded the production of Animals; ſo the production of Animals aquatil and volatil preceded the production of terreſtrial Animals.

What may elſe be ſaid in relation to this Days Work, I ſhall deliver in the Conſideration of the next firſt Part of the ſixth Days Work. Therefore,

4. The firſt Part of the ſixth Days Work comprized the production of Terreſtrial Animals; *Verſ.* 24. *And God ſaid, Let the earth bring forth the living creature after his kind, and cattel, and every creeping thing and beaſt of the earth after his kind; and it was ſo.*

The Reaſons why Terreſtrial Animals had their production after the Fowls and Fiſhes, have been partly before intimated, and ſhall be here ſomewhat farther conſidered: And they are theſe,

1. Although Almighty God be not bound or ſtraitned in his Operation to the ſequaciouſneſs of the Matter, yet it is not improper for us to ſuppoſe that he may purſue the Laws of his own making, where it conſiſts with his deſign and intention: The production of Vegetables by the Earth was indeed earlier; but then the energy of his Inſtrument the Light, perchance was ſtronger than after the diſtribution thereof into the Receptacles of the Heavenly Luminaries.

2. *Ad plurimum*, the nature of Terreſtrial Animals was a more refined nature than that of Fowls and Fiſhes, and therefore as the Matter might reaſonably expect a longer *mora* for its Concoction, ſo the Method of Creation, *cæteris paribus*, proceeded from the leſs elaborate Integrals of Mixt Bodies to the more elaborate, concluding with Man.

And this preference of the Brutes above Fowls and Fiſhes, appears 1. In the manner of their natural procreation, the Brutes being *ad plurimum vivipara*, the others ariſing *ad plurimum ex ovo.* 2. In the great variety of their bodily compoſure; the texture of the Bodies of Brutes being far more curious, and fuller of variety than others. 3. *Ad plurimum*, the animal Faculties of the brutal Soul are far more perfect than thoſe of others, their Phantaſies and Memories refined, they have greater and more lively Images of Reaſon, and more capable of Diſcipline than either Fowls or Fiſhes.

Now touching the production of Animals, whether Terreſtrial, Aquatil, or Volatil, we may obſerve that they are in the ordinary courſe of Nature of two kinds: Some, which ariſe among us no otherwiſe, nor in any other manner than *ex ſemine*, which we uſually call perfect Animals, and ariſing by univocal generation; others there are that be imperfect, ariſing ſpontaneouſly in the Earth, Air, and Water, as Worms, Flies, and ſome ſort of ſmall Fiſhes and watry Inſects.

This being premiſed, I ſhall now ſet down ſome Suppoſitions which ſeem to me truly to explicate the production of theſe Animals, which are theſe that follow.

1. Although the predominat Matter in the conſtitution of Fowls and Fiſhes were Water, and in the conſtitution of Terreſtrial Animals were Earth; yet that Water nor that Earth were not ſimply ſuch, but were mixed and impregnated with the other Elementary Principles.

2. That

2. That all the *Species* of perfect Animals of all kinds were constituted in their several Sexes in the fifth and sixth day of the Creation, but yet we must not think that all those kinds which we now see were at first created, but only those primitive and radical *Species*: How many sorts of Animals do we now see, that yet possibly are not of the same *Species*, but have accidental diversifications, as we may observe in the several Shapes and Bodies of Dogs, Sheep, Pyes, Parots? which possibly at first were not so diversified; some variation of the same *Species* happen by mixt Coition, some by diversity of Climates, and other accidents.

3. That the first Individuals in their distinction of Sexes were not produced according to those Methods of Nature which they now hold, nor *ex aliquo præexistente semine*, but by the immediate efficiency of Almighty God, out of the Matter prepared or designed for their Constitution.

4. That they were made in the first instant of their Constitution in the full perfection and complement and stature of their individual and specifical nature, and did not gradually increase according to the procedure of animal augmentation at this day: and the reason is, because those gradual augmentations arise from the Seminal Principle which gradually expands it self to the full growth; but here they arose not from any such Seminal Principle, but the Hen was before the Egg.

5. There was no mean portion of Time between their Formation and Animation, but both were together, they were living Beings, and living Souls, and living Creatures as soon as they were formed.

6. That consequently the Formation of the Body of these Animals was not as now it is, by the Formative Power of the Soul, which must needs be gradual and successive, as we see it is, and must be at this day in all natural Generations; but the Formation and Information of them was by virtue of the immediate *Fiat*, Determination, or Ordination of the Divine Will.

7. That in their Origination, the *Species* of these Animals were determined neither from the Matter, nor from the universal Cause, the Celestial Heat; but by the Divine Intention and Ordination.

8. That by the same Divine Ordination and Intention, the Faculties specifically belonging to every Individual were annexed and alligated to it, especially the power, *conficiendi semen prolificum, & speciei propagandæ ex mutua utriusque sexus conjunctione.*

9. That although by the Divine Power and Ordination all these perfect Animals did arise from the Earth, yet that Prolifick Power of propagating of them was never delegated or committed to the Earth, or any any other Casual or Natural Cause; but only to the Seminal Nature, derived from their Individuals, and disposed according to that Law of propagation of their kind, alligated as before to their specifical and individual nature.

And therefore it its perfectly impossible that any of these perfect Animals can be casually, or naturally, or accidentally produced by any Preparation of Matter, or by any Influence of the Heavens, without the miraculous interposition of Almighty Power; because the Earth, or those Influences have not this power concredited to them, but their production is irresistibly alligated to the *Semen innatum*

and conjunction of Sexes; the Earth can as naturally produce a Sun or a Star, as it can a Man, or a perfect Animal.

10. Whether those imperfect or equivocal Animals were created or no, it is not altogether clear; possibly some might be then produced, whose kinds were likewise producible spontaneously after; but it seems beyond contradiction that all were not.

11. As by virtue of that general Commission or intrinsick Prolifick Power given to the Earth to produce spontaneous Herbs, as Grass, *&c.* it doth naturally produce such Herbs; so by virtue of that common Commission given by Almighty God to the Earth and Water, and to that Spirit of Nature diffused in it, it doth naturally produce those equivocal insect Animals which arise out of them.

The same Law of the Creator that hath eternally excluded, or rather not committed to the Earth or Water the power of producing perfect Animals, hath given and committed to them by concurrence of that Vital Heat of the Sun and the common Spirit of Nature residing in them, a Productive Power of some equivocal insect Animals in Matter fitly prepared.

Touching therefore the Origination of Insects I shall declare my thoughts as followeth; 1. That by virtue of the Divine *Fiat* the Earth at first did produce some Individuals of several kinds, which is imported under the words [*Every creeping thing after its kind.*] 2. That as I have before shewn, the greatest part of the Insects that are commonly produced, and seem to be spontaneous productions, are yet the univocal and seminal productions of Insects of the same kind. 3. That yet it is a certain Truth, that some Insects are, and have an Origination since the first Creation without any formal, univocal, seminal production; some out of Putrefaction, some out of Vegetables, some by very strength and *fracedo* of the Earth and Waters quickned by the vigorous Heat of the Sun, which infuseth into some Particles of Matter well prepared and digested a kind of Vital and Seminal Principle. Some have thought the very Sun and Earth are endued with a Vital, yea and with a kind of Sensitive Nature, and thereby enabled as it were to spin some prepared Matter into vital and sentient *Semina* for those insect Animals: But we shall not need to trouble our selves with that incertain Speculation; we are sure that the greatest part of the Superficies of the Earth being daily and hourly impregnated with the corrupted and dissolved Particles of Vegetables and Animals, is at least highly prepared for the spontaneous production of Insects and Vegetables of some kinds; and the benevolent Heat of the Sun hath a great influence thereupon to be the Instrument of Almighty God in these Productions: but it is his Sovereign Institution that committed to the Sun, the Earth, and the Waters and their Particles to produce some insect Animals, and therefore they produce them, as Worms, Flies, Frogs; but he hath not concredited or committed to them that primitive Productive Power of perfect Animals, nay not of some noble Vegetables, *sine præexistente semine univoco.*

Thus we have considered the History of the Worlds production, and the

the reasonableness thereof. Now to the production of Terrestrial Animals, (for of the Creation of Man I shall speak in the next Chapter.)

It is true that there are two sorts of natural Integrals whose History is here omitted, and yet that omission not without great reason; because it seems their production was in a manner accidental and spontaneous, depending upon the various mixture of Materials formerly created, namely, Meteors and Minerals: the former consummated in the Aery Region by the apposition and mixture of divers Excretions and Exhalations of the other parts of Nature; for we neither find, nor have any cause to look for Clouds, Comets, or Meteors in the compass of the first six Days. The latter seem to be Concretions and Digestions in the Bowels of the Earth, either altogether or for the most part begun and perfected after the Six Days Work, by the energy of the external, and Celestial, and internal, and connatural Fire and Heat.

Some *Jews* and *Cabalists* there have been that have supposed those six Days to be of different length and extent from these Natural we are acquainted with, and that those six Days, especially the three first and three last thereof, differed exceedingly one from another, and that as the three last were of a far greater length and extension than our ordinary day or night; so the three former were exceedingly larger than the three latter of the six, and the computation of the whole by Six Days was only by a kind of Analogical Expression to give Mankind a distinction of the Order of Production; and they suppose, 1. That the Divine Author by this distribution of Days did not intend any determinate portion of Time, much less days or times conformable to the length of our days, but certain Mysterious Numbers of Times; and therefore *Philo Judæus* in his first Book *Allegoriarum Legis*, tells us, *Rusticanæ simplicitatis est putare sex diebus aut aliquo certo tempore mundum conditum, complevit sexto die opera, intelligere non debes de diebus aliquot, sed de senario perfecto numero*; and then takes a great deal of pains in illustrating the Mystery of that Number. 2. Because they would willingly introduce a kind of natural production of things according to a natural method, and gradual and successive procedure, without the Supposition of an immediate concurrence or interposition of a Supernatural Influx or Causation; and therefore because the separation of Light, the first Days Work, naturally required a great time; as also the rarefaction and separation of the *Expansum*, the separation of the Bodies of Earth and Water, and likewise the maturation and production of Vegetables out of it might require a longer time than some of the subsequent days Works, therefore the three first days were much longer than those that follow: And again, since each of these great Works attributed to the three latter days were great Works, required great digestion, and separation, and maturation of the Matter for the Heavenly Bodies; as also for the maturation of living Animals, and their production: that even those days might be conceived of a dimension or computation much larger than our Days, and possibly than our Months, or Years, or Ages. But these seem to be vain Conjectures, introduced meerly to exclude an intermixture of a supernatural concurrence in the speedy production and formation of things, and not warranted by the Holy History, but contra-

dicting it: For we have no reason to imagin that the sixth day was of any other dimension than the seventh day, wherein God Almighty rested; nor the fifth any longer than the sixth; neither was it at all necessary the days should be protracted to that length of time for two Reasons: 1. Because if we should be so vain as to suppose a long process, somewhat sutable to what we now see in Nature, for the separation, disposition, and production of the Six Days Work; yet certainly there was a time intervening between the first Creation of the *Materia Chaotica* and the very inception of its complement into that Order that the Six Days Work exhibit to us; and although that time is not determinately set down, yet we may justly think it a long time: And again, in that long interval there was a powerful Agent subacting, disposing, and influencing the *Massa Chaotica*, expressed by the Spirit of God moving upon the face of the Waters; whereby if it were necessary to have such a preparatory process towards the formation of the World antecedent to such formation, it was not wanting here, and every Particle might thereby be so ripened and prepared that they might successively give their apparences in those portions of time wherein they are ranged by the Sacred History. 2. Although in the Creation of the World and the Integrals thereof, Almighty God seemed something to conform to the reasonable Order of Causes sutable or congruous to Effects, and did not put forth such an immediate Activity in the Production of things as he did in their first Creation; this being done in an instant, that successively, gradually, and yet *per moram*: Yet he was not bound to observe all the Ceremonies and Formalities of Natural Effects; neither did he, but by his own immediate Power gave a greater expedition to the first production of things, than that which he instituted for the standing, fixed, and ordinary Method of future production and maturation of things to be generated after their first Origination: And as it was impossible without the apposition of a Supernatural Being and Causation, that the Matter of things should be created out of nothing; or being so created, could without the Operation of a Supernatural Intelligent Being raise it self up to the admirable Fabrick wherein it was finally perfected; so it is not reasonable to deny to such a Supreme, Supernatural, and Infinite Power an effectual maturation and compleating of things in those portions and orders of times that best pleased him, and which his Wisdom judged most agreeable to his Works and Ends. We find every Command of the Divine Will in the Creation of things answered by an immediate *obsequium* in the created Matter: If He say, *Let there be Light*; *Let the Waters be gathered into one place*; *Let the Earth bring forth*, &c. the obsequious Matter presently answered the Command with a *Fuit ita*, It was so. Not as if there were any Vocal Command given out to the Matter, but the secret Command and Determination of the Divine Will governed the Matter into an immediate conformable Production, according to the *Idea* residing in the Divine Understanding; *He spake and it was done, he commanded and it stood fast.* This best became the Majesty and Sovereignty of the Lord of all things.

CAP.

CAP. III.

Concerning the Production and Formation of Man.

HAving taken the former brief Survey of the History of the Creation and Formation of the rest of the Universe, I shall now proceed to what I principally intended in the discussion of that History, namely, the Formation of Mankind, *Gen.* 1. 26. *And God said, Let us make Man in our own image, after our likeness, and let him have dominion over the fish of the sea, and over the fowl of the air, and over all the earth, and over every creeping thing that creepeth upon the earth; so God made man in his own image, in the image of God created he him, male and female created he them; and God blessed them, and said unto them, Be fruitful and multiply, and replenish the earth and subdue it, and have dominion over the fishes.*

Touching the Creation of Man I shall observe these things.

1. The Efficient of this first Production of Mankind was Almighty God, by the counsel and determination of his own Will: The Creation of Man is ushered in with a Prologue unlike the Creation of other things, *viz.* by a kind of deliberation; not as if the Divine Wisdom stood in need of counsel, advice, or concurrence of others, or of a *mora deliberativa* with himself; for known unto him were all his Works from the beginning, and by one simple, instantaneous, and indivisible Act he foresees what is fit to be done, and judgeth and determineth the same: but it is added as a Mark of Attention, and an Elogy of Prelation of this Work of the Creation of Mankind above the rest of the visible Creatures.

Some of the Ancients have thought this Deliberation was real, and to have been made with the superior World of Heavenly Intelligences; *Nec (si fas sit ita loqui) Deus quicquam fecerit, donec illud expenderit in familia superiori:* and it should seem that the Opinion of *Plato* in his *Timæus*, That Almighty God did advise with the *Dii ex Diis*, or the Intelligences or Angelick Natures, and used their assistance in the Creation of the Bodies of Men, though he himself formed their Souls; seems to be derived from the inspection of the *Mosaical* History or Tradition of it, whereof he gave us his Sense or Exposition, that this [*faciamus hominem*] was by the concurrence or subordinate cooperation of Angels.

Others, with far greater evidence, do think it was the Deliberation and Conclusion of the Three Persons of the Holy Trinity.

And some again interpret it to be only a Majestick Expression touching Almighty God, *more regali*, in the Plural Number; but touching these Conjectures I shall say no more but only this, That the first Origination and Production of Man was by the immediate Efficiency of Almighty God, not as if God Almighty used any Manual or Physical Plasmation of a Man, as the Statuary makes his Statue, or as the Poets feign *Prometheus* moulded up his *molle lutum* into the Humane Shape, and animated him by diffusion of Fire into him fetcht from Heaven; but by the Word, or Determination, or *Fiat* of his Omnipotent Will Man was formed and made.

2. The constituent Components out of which he was made were of

two

two kinds, 1. His Corporeal and Animal Nature was the same with the Matter of other Terrestrial Animals, namely, the Elementary Matter, whereof Earth was the predominant. 2. His Spiritual Constituent as I may call it (though in union with the Sensible Power it be his constituent Form) was a Spiritual Substance, created and infused by Almighty God, *Gen.* 2. 7. *And God formed man of the dust of the ground, and breathed into his nostrils the breath of life, and man became a living soul.* This Text gives us briefly, 1. The Matter of his Corporeal and Animal Constitution, the Dust of the Ground, or as elsewhere, Red Clay. 2. The Nature or Kind of this other constituent part, the Breath of Life, a Vital, Spiritual, Intellectual Substance or Nature. 3. The Union thereof to the Body, and Animal Nature breathed into him. 4. The result from that Union, Man became a living Soul, the whole Composition taking denomination from his nobler essential Constituent. And this short History gives us the best account that can be of the true Nature of Man, namely, that he consists of two essential constituent Parts, 1. His corporeal and animal nature, which though it were not only gradually but specifically different from, and advanced above the Brutal Nature both in the Elegance, and Usefulness, and Majesty of his corporeal Fabrick, and in the excellency and perfection of his animal Faculties, as in due time shall be shewn: Yet in his essential part he seemed to have a nature in some way common with them, both being material, and both their Faculties of the Animal Nature directed and subservient to a Life of Sense, and therefore corruptible and mortal in it self. 2. His Intellectual Nature, which is spiritual, immortal, created immediately by Almighty God; that as in his Animal Natures he was the highest of living, corporeal, and visible Creatures, so in his Soul or Intellectual Nature he seems to be constituted in the lowest rank or range of Intellectual and Immaterial Beings, by this means he seemed to be *Nexus utriusque orbis.*

I have before observed in the Order of Natural Beings with which we are acquainted, that there seems to be an admirable gradation in things, and the lower rank of Natural Existences have some rough draughts, and strokes, and shadows of those perfections which are in the superior: Minerals are a degree below Vegetables, yet they seem to have some shadow of the Vegetable Life in their growth, increase, and specifick configurations. The lowest degree of Life seems to be the Vegetables, yet in many of them and their Faculties, they seem to have some kind of rough strokes or draughts of the Sensitive Nature, and the highest advances of the Vegetable Nature seem to come up to the confines and borders of the lowest Form of Sensible Beings, and to participate of somewhat of Sense; which appears not only in the natural production of Insects out of the finest parts and effluxes of most Vegetable Natures, but also that some such things there are that seem in their very nature of Plants to have a kind of lower connexion of the Animal Nature in them; as appears in the Sensitive Plant or *Planta modesta*, and those Canes in the Kingdom of *Angola*, that are filled with a Worm growing from and continuous with it, called *Trombe.* Again, in the Animal Province there are divers sensible Insects, both aquatil, volatil, and terrestrial, that seem to be in the very next Rank of Nature to Vegetables: and again, some of the superior sort, especially of Terrestrial

Animals

Animals have *quandam imaginem & umbram rationis*, and are advanceable by Induſtry and diſciplinable Acts to a great perfection, and ſeem to be the next rank of natures below the animal nature of Man, as Elephants, Horſes, and ſome others; but the nature of Man, though in the animal part of him he is the higheſt rank of viſible Animals; yet in his intellectual nature he ſeems to participate of the angelick nature, and is next below them in the ſpecifical exiſtence of Soul, *Pſal.* 8. 5. *He was made a little lower than the Angels*, and participates of the higheſt degree of Animals and the loweſt degree of Intelligences; participating of both natures, to keep as it were a continuity between the upper World and the lower, and to maintain a communion with them and between them.

3. We have here alſo the *Idea* or Model according to which the Humane Nature was framed, namely, after the Image and Similitude of God; wherein we are to take in Man conſtituted in his full and compleat nature, namely, in the union of his two Eſſential Parts, his Animal Nature, and his Intellectual. What this Image and Similitude of God was, or wherein it conſiſted, is variouſly diſputed, I ſhall firſt conſider what it was, and then what it is and was.

1. It was not not any corporeal Similitude or Image; for the Divine Nature is incorporeal and inviſible, and therefore hath no Image or ſimilitude of that kind.

2. It was not any Image adequate to the Divine Perfection and Excellence, as the Impreſſion in the Wax is the adequate Image or Repreſentation of the Seal, and as large as it: for God's Perfections are infinite both in extention and intention, and no finite Being can be an adequate Image of an infinite Being or Perfection.

3. It was not an Image that takes in all the reſemblance of the Parts of Divine Perfections or Excellences, as the little Image upon *Cæſar*'s Coyn reſembled *Cæſar*'s Effigies, or a new born Infant reſembles a full grown Man; for neither the Perfections nor the Being of God do *convenire in uno aliquo genere univoco*, with thoſe of Man: the Perfections of God are not repreſentable by any created Being in a true propriety of their nature, no more than in their degree of intention or perfection.

4. Neither do I take it, that this Image or Similitude is only meant of that *Idea* of the Humane Nature in the Divine Underſtanding, conformable to which Man was made; for though this be true, yet it is not all it ſays, nor all that is meant; becauſe it would give Man no greater preference than the very Vegetables that were made the Third Day, which were made according to the Ideal Image thereof in the Divine Intellect.

5. Neither do I think it was meant of the Second Perſon in the Trinity, who was the expreſs Image of the Father, the brightneſs of his Father and the expreſs Image of his Perſon; for although Chriſt aſſumed Humane Fleſh, yet it was many Ages after: and in the Language of the Scripture and the Ancients, in the Creation Man was made like unto God, but in the Work of Redemption the Son of God became like unto Man: *Phil.* 2. 7. *Made in the likeneſs of Man.*

6. Neither do I think that the Image of God here meant was the greater World, the Univerſe, which though it be an excellent Image of the

the Divine Excellency, namely, of his Majesty, Power, Wisdom, and Goodness, and sets it out far more than any single created Nature can; especially if we take the Universe in its full comprehension both of the visible and intellectual World. And though it be true that Man is a kind of Abridgment, a little Abstract of that greater World in his Intellectual Nature, resembling in his Soul the *Mundus intelligibilis* of created Intelligences, and in his Animal Nature bearing an admirable Analogy to the *Mundus aspectabilis*; and so in both Natures conjoyned, being the little Image or Portraiture of the great and universal World: for though this is a Truth, yet it seems it was not the Truth intended.

7. Neither do I think it was intended of that resemblance which in his Intellectual Part he bore to the good Angels, who of any particular created Natures best resemble Almighty God; being pure, immaterial, intellectual, powerful, immortal, wise, and benevolent Beings: though this be also a Truth, that the Soul of Man seems to be the lowest rank of Angelical Natures, yet it seems not the Truth that is here intended: for it is plain that the Image of God here meant, is spoken with respect to the intire Humane Nature, and of the whole *Compositum*, as appears in the reason after given by God, upon the interdiction of Murder, *Gen.* 9. 6. which had been an improper reason if applied to the Soul, which is immortal, and uncapable of death.

But the meaning of this Image of God seems to be this: That as all Excellency comes from that most Excellent Author of all Beings, in whom all Excellencies are lodged formally, or essentially, or virtually; so this Excellent Author did these things in relation to the Humane Nature: *viz.* 1. He gave him a capacity greater than any other visible, single, created Being to receive the noblest Excellencies: 2. That he gave him as great a Capacity as possibly might be consistent with such a nature to receive Divine Excellencies: 3. That he filled that Capacity with all those Excellencies that he was thus capable of, saving only that of a necessary immutability in the fruition of all those Excellencies.

Now these Excellencies with which the Humane Nature was filled, and which made him, as much as was possible for such a created Being, to resemble his Maker were these:

1. In the structure of his Body and Animal Nature, most singular Majesty, Beauty, Strength, and Usefulness.

2. In his Soul a whole Constellation of Divine Excellencies, *viz.* in the Nature of it, Immortality and Spirituality; in the Faculties of it, a light and clear Intellect, a free and incoacted Will: in all which he highly resembled the most intellectual and freest Being in the Habits of it, Knowledge in the Understanding, enabled by the noblest Object, God himself, and all other Objects of use and conveniency to him: in his Will, rectitude.

3. In his whole *Compositum*, perfect fruition of all that sutable good to his nature, wherein he consisted in Happiness, Immortality, or a possible persevering in Life without dying, Power and Authority over this inferior World and all things therein, as God's Vicegerent upon Earth, in which respect Governours are said to be Gods: a sufficient power and strength as well in the Frame of his Animal Life, as in the sagacity and advantage of his Understanding, to exercise that Dominion

and

and Sovereignty; and lastly, a due Order, Subordination, and Regiment of all his Faculties.

Of these Perfections some were accidental or adventitious to the Humane Nature by the Benignity of Almighty God, and concredited thereunto upon condition of his Obedience to the Command of God; and upon the breach of that Condition were either utterly lost, as the indissolubility of the Union of the *Compositum*, by one Man's Disobedience Sin entred into the World, and Death by Sin: Others were abated, as the Excellency of his Knowledge, Righteousness, the fruition of Happiness, the Perfection of his Sovereignty over the Creatures, the Gloriousness and Beauty, and much of the Vigour of his Body, the exquisite Order and Subordination of his Faculties; but his Essentials, the Immortality of his Soul, the Faculties of Intellection and Will, and the Natural Beauty and Usefulness of his Body remains, notwithstanding that terrible Concussion; whereof somewhat more hereafter.

4. We have the Method of this Production of Man; it was not by or from any meer Natural Cause, but by the immediate Command of the Divine Will, Wisdom, and Power: it was not from any *Semen* naturally, accidentally, or intentionally formed, and so by a gradual maturation and growth *ex uteris terrestribus*, or as the *fœtus humanus* is perfected at this day: For it was not possible that any such Seminal Principle should be formed casually, or by any meer Natural Cause, as hath been already shewn: And although the Divine Power could have perfected all, as well Man as the other Animals, by first forming such a *Semen*, and giving it either a gradual or speedy production, as Insects are at this day produced; yet 1. It was utterly superfluous to have used such a *processus formativus ex semine*, because it required no less than an Almighty Power to have moulded and fashioned, or actuated such a *Semen* as to have produced Man by an immediate Supernatural Formation and Production: and therefore since the same Power was requisite in both, it is not at all necessary nor reasonable to suppose so long a process as first to form a *Semen*, and by a Seminal Process to have perfected the Humane Nature, and the Holy History expressly imports the contrary. 2. If we suppose a *Semen* prepared by the Divine Power, that Production that must arise thereupon must either be immediate and sudden, if not absolutely instantaneous; or it must be gradual, and pass through all these spaces of Time, gradual Formation, and accession of Growth and Increase, as we see *in embryone & fœtu nuper nato*: We cannot suppose the former but we must suppose it to be otherwise than natural, and call in the Divine Power to effect it, as much as in an instantaneous formation; *sine præcedente semine*: And we cannot suppose the latter, because it is expressly contrary to the description of the Humane Production, for it was done within the compass of the Sixth Day; and the formation and perfecting of the Humane Nature was immediately finished after the Omnipotent Command and Determination of the Will of God, it was no sooner said [*faciamus hominem, &c.*] but it was done.

It is true, in that ordinary Law which Almighty God hath instituted in Nature already established by him, there are regular, and successive, and gradual procedures, and it is convenient it should be so: and it is true also, in this short period of the Six Days Work, within which the

Universe was finished, Almighty God observed a certain convenient Order, making that to precede which was fittest and most useful to precede in order to the production of things; but as to the speed and dispatch of Productions, the Almighty God used the Majesty that became the Excellency of his Greatness, and obsequious Matter presently yielded to the Power of his Command, *Fiat, & factum est*; Psal. 33.9. *He said and it was done, he commanded and it stood fast.*

Therefore although now in settled Nature, and according to the standing Laws of the Divine Wisdom Man is first conceived *ex semine*, then lodgeth 10 Months *in utero muliebri*, wherein during that time he is gradually formed and perfected; and then after his Birth gradually increaseth, passeth through the impotency of Infancy, the weaknesses of Childhood, and the follies of Youth before he comes to a ripe and full age, yet it was not so here; in the same moment the Body is formed in its full and perfect nature, and the Animal Soul and Faculties together with it and the Rational Soul infused in the same moment, without any priority of Time, but only of Order and Nature: So that Man was at the very same moment a perfect Organical Body, with all his Nerves, Veins, *Viscera*, Bones, and Parts conformed, a Vital and Sensitive Nature joyned with it, and a Rational Soul infused, without first living the Life of a Plant, then of an Animal, then of a Man; the whole Scene was performed in one moment, and so it became both the Greatness of the Divine Majesty and Power; and so it was necessary to be in the first production of Man, although in the succeeding procedure of natural Generations it must be and was otherwise, because the supreme Wisdom and Will judged it so.

And although to any Man that will duly consider almost any thing, there must of necessity be another Rule or Law for the first production of things, than there is or may be in the ordinary regiment and governing of Generations when Nature is once established; yet the want of this Consideration hath bred all those vain Errors of those Philosophers that asserted the Eternity of the World; and of those others, who being not satisfied with that *Hypothesis*, but driven by a kind of necessity of Reason to acknowledge an Origination of Mankind, yet could not deliver themselves from fancying that Humane Productions must needs be as like those they now know, as they could well frame them: And therefore according to these Men the Earth must be conceited to be *Mater*, and the Sun *vice Patris*, and the Earth must have her *Uteri* and *Succus nutritius*, and the Increase of Mankind must be by some such gradual process as we see in natural productions or *sponte nata*; and they cannot easily bring their Minds to believe the instantaneous production of Man by the immediate Power of God, because it hath a gradual process in ordinary natural Generations: and yet the same Men can give themselves leave to imagin, *Hominem oriri posse sicut blitum*; though never Experience of former Ages since the existence of Men upon the Earth give us any Example of it, bating only the Fictions of some Poets.

Maimonides, lib. 2. cap. 27. hath observed this Mistake, and singularly confutes it, by evincing, That if Men go by this Rule of Judgment the nature of things in their Original, as they find them in their Constitution, being constituted, they will disbelieve the most certain Truths. *Neque argu-*

argumentari licet ullo modo à natura rei alicujus post illius generationem & firmam subsistentiam in perfectione sua ad naturam ejus eo tempore quo movebatur ad generationem; quod si verò his erras, plurima tibi orientur dubia & absurda, ut pro falsis habeas ea quæ vera sunt, & vice versa pro veris ea quæ falsa sunt; and gives this Example, Suppose a Child of a ready Wit, whose Mother died shortly after his Birth, should go alone with his Father into some uninhabited Island, where he was bred up without the sight of any Beast or Woman, and there should inquire of his Father, *Quomodo & qua ratione facti sumus, existentiámque nostram accipimus? cui pater, Unusquisque nostrum generatur in ventre cujusdam individui speciei nostræ, nobis simillimi, quod fœmina vocatur; in ventre autem existentes exiguum admodum primo corpusculum habemus, movemus, nutrimur, & paulatim crescimus, & vivimus donec ad certam quandam magnitudinem venimus; tum aperitur inferius in ventre porta quædam, & eximus; nec tamen postea crescere desinimus, usque dum ad hanc circiter quam vides quantitatem pervenimus: Puer ille orbus statim iterum quæret, dum ibi parvi fuimus, ibi viximus & nos movimus & crevimus, an quoque comedimus & bibimus, ac per nares respiravimus an excrementa ejecimus? respondetur ei quod non: ipse sine dubio hoc incipiet negare, & demonstrationes extruere, ex impossibilibus argmentando ab ente perfecto, & dicet, quilibet nostrum si per unicam horam careat respiratione, mori cogimur; quomodo credi potest aliquem in utero clauso per tot menses vivere potest?* And so goes on with the young Man, forming very strong Arguments against this most certain Truth, meerly by the misapprehension of Inferences from the nature of things in their perfect Existence, to the nature of things in their Original.

It is true, Men must be wary and considerate before they conclude against the Frame and Order of things as they appear in Nature, because otherwise Men may take liberty to conjecture any thing, which is certainly unbecoming a Philosopher, especially who pretends to govern himself by the *Phænomena* of Nature, and it is that which we have before condemned. But on the other side, to suppose that impossible in the Origination of things which we find not in things already setled, is too hasty and rash a Conclusion; especially when we are driven to confess another kind of Origination of Mankind than now is, and do not find any so probable and so free from absurd Consequences, so ancient, so convincingly delivered, as that by the Divine Historian *Moses*.

And this is so much the rather credible, because it is impossible to conceive that Man could have his first Origination but from an intelligent, most wise and powerful Efficient, unless a Man shall offer violence to his own Reason; and certainly to such an Efficient such a Production is not only possible, but futable to be supposed.

5. We have here prescribed and determined the Law and Means of the natural production of the Individuals of Mankind in their future production, according to that Method and Mode which hath in all Ages ever since by the course of Nature been observed, namely, by Propagation by mutual Conjunction of their Sexes, though this could not be the Method of their first production.

And this Prolifick Power of production of Mankind by successive natural generation, was by the Virtue and Efficacy of the Divine Institution and Benediction given to Mankind in his first Creation, and by

virtue thereof that Power and Faculty is continued in them, and traduced to the ſucceeding Individuals to this day; and accordingly, *Virtute divinæ ordinationis & inſtitutionis uterque ſexus appetitum illum procreandi innatum habent, membra & vaſa huic facultati ſubſervientia hucuſque obtinent, & diverſitate ſexuum eidem officio neceſſariâ gaudent, quod non vel caſu, vel ſtupida & cæca natura obtinere potuerunt, ſine ordinatione, appropriatione, inſtitutione ſummi & ſapientiſſimi numinis, ejuſque volitionis & determinationis:* And as this Law of future Generations was thus given to Mankind, and *quaſi alligata* to them, ſo it is excluſive of any other either caſual or natural way of Generation, except it be by Miracle; and therefore we muſt now ſuppoſe a poſſibility of an utter abrogation of this natural Law, if we ſhould ſuppoſe any other kind of natural production of Mankind ſhould after this firſt production of the Humane Nature be poſſible: We may with as fair a Suppoſition imagin that a Man ſhould be produced by the natural conjunction of Sheep or of Lions, or a Star be produced *ex putri materia terreſtri*, as to ſuppoſe a Man to be produced accidentally, caſually, or naturally in any other Method than this Divine Law of Nature fixed in the Humane Nature by the Divine Inſtitution hath determined, unleſs as great a ſupernatural Miracle ſhould happen by the Divine immediate Power, as did in the Conception of the *Meſſias*.

6. As ſubſervient and neceſſary to this Law of future Generation, we have here the diſtinction of Sexes, [*Male and female created he them.*] This diſtinction and conjunction of Sexes in order to the propagation of Mankind, was part of that Law and Order that the Wiſe God inſtituted for this end.

And certainly there needs not any clearer Argument that the production of Mankind was not a Work of Chance or blind neceſſary Nature, but a Work of a moſt Wiſe, Intelligent, Powerful Being, that adapted the diſcrimination of Sexes to the propagation of Mankind; either Sex without the other being in Nature utterly unprofitable and unuſeful to that end, without which the ſucceſſion of Mankind muſt have been determined in the firſt Individual.

And it is no leſs evidence of the continual active Providence of that Great and Wiſe God, that the ſucceſſion of both Sexes is continued in that equal proportion, as that there is no grand diſparity in the propagation of Individuals of either Sex.

This diverſity of Sexes was not in the ſame Individual, as if *Adam* had been *Androgyna*, or one double Perſon conjoyned or continued, conſiſting of both Sexes (till they were after divided and ſevered) as *Plato in Sympoſio*, and many of the ancient and modern *Jews* have thought; but the firſt Creation of *Adam in virili ſexu* being perfected, the production of *Eve ex latere Adami* was the very ſame Day of his Creation miraculouſly performed by Almighty God; for the Words [*Male and female created he them*] referr to the whole entire complement of the Creation of Man, which was not till the Formation of *Eve*. There may be ſomething myſterious in this buſineſs of the Manner of *Eves* Formation which may be hard to unriddle.

It is enough, that God Almighty before the end of the Sixth Day formed both Sexes of Mankind in order to the common help of each other,

other, and the propagation of the future Generations of Mankind: the History therefore of the Formation of *Eve*, though mentioned in the second Chapter, and after the Benediction of the Seventh Day, must necessarily be referred to the Sixth Day, wherein it is expressly affirmed that both Sexes in distinct Persons were then created, [*Male and female created he them*;] and such transpositions are not unusual, neither in the Holy History nor in other Histories.

The first Chapter gives the brief and orderly Relation of the whole *Series* of Times, and Things done in them; and the second Chapter is only a fuller and more explicit Declaration of some things that are briefly and compendiously delivered in the first Chapter, as appears not only by the Relation of the Formation of *Eve*, but divers other passages relating to what was transacted in the first Chapter.

7. The Formation of Man was the last Work of the Creation, the last Work of the last Day: and the Reasons of this Order seem to be these; 1. Because in the Method of the Creation of Sublunary Natures Almighty God proceeded from the less to the more perfect and curious Parts of the visible Creation: as first he made Vegetables, then Fishes and Birds, then Brutes, and Man in the last place, as the most perfect, and containing not only the Faculties of Vegetables and Animals, and that in a more perfect nature, but also a superadded, intellectual, spiritual Soul. So he was the noblest part of the Creation, at least of this lower World. 2. Because Mankind should be furnished to his hand with all things convenient and useful to his existence and operation, as the Grass was provided before the Brutes were created, so before the Creation of Mankind Fruits of the Earth were provided for his food and delight, a Paradise for his entertainment and employment of his Senses and Industry, Idleness being not indulged even in Paradise; and the goodly Furniture of the visible World both Celestial and Sublunary, to raise his Admiration, Contemplation, and Delight. 3. Because God Almighty intended him a liberal Patrimony, which he would furnish and compleat in all its numbers before Man was created, and as soon as he had created him, gave him this inferior World, as his Usufructuary and Steward at least; but yet withall gave him a subordinate dominion of that whereof he made him his Steward: and this great Benefactor prepared this Gift of this inferior Terrestrial World to be ready for his Creature Man's reception as soon as he had a Being, and accordingly gave it him with all its Furniture. *Gen.* 1. 28, 29.

8. That Man was by Almighty God in his first Creation in a state of perfect Felicity and Immortality, but under a condition of Obedience to the Divine Will, Command, and Law; that he had implanted in his Mind and Conscience certain Principles of Moral Goodness and Righteousness, which are the Original of those common Notions of Good and Evil, as so many secret Byasses and Inclinations to the observance of the Good and avoidance of the Evil. And as even the inferior Animals have implanted in them secret Instincts and Tendences for the preservation and advance of their sensible, individual, and specifical natures; so these implanted Notions and Moral Inclinations in the Mind of Man, were therein lodged to guide and lead him in a conformity to his excellent Constitution, and for the attainment of an intellectual and

and eternal Good; and these, though the vigour and brightness of th were much abated by his Fall, yet were transmitted with his natu. his Descendents.

And this is the Original of those common Notions which yet rem.ain in the Humane Nature, though refracted and abated by the Fall of Man; this is that common Light and Law of Nature which to this day in some measure prevails in the generality of Mankind, to the Acknowledgment, Adoration, and Reverence of a Deity and Moral Righteousness; this is that Law of Nature mentioned by the Apostle, *Rom.* 1. written in the Hearts of Men, wherby they do by Nature the things contained in the Law: But of this I shall write somewhat fuller in the ensuing Chapter.

9. Besides this Moral inscribed Law, God Almighty for the tryal of Man's Obedience, gave him a positive Law prohibiting the eating of the forbidden Fruit, under pain of temporal and eternal Death and Curse; and Man was left in the hands of his own liberty, to obey or disobey it.

10. That Man being left to the free liberty of his own Will, though furnished with sufficient abilities to have obeyed Almighty God, yet by the temptation of Satan, his own sensual appetite, and ambitious affectation, violated his Maker's Law, and broke that Condition upon which much of his Perfection and Happiness was conferred upon him; and although he retained his Essentials, namely, his Essential Constitution, this Spirituality and Immortality of his Soul, his Faculties of Understanding and Will, he thereby incurred these unhappy deprivations.

1. A loss of the immortal state of his Composition, being now obnoxious to the separation of Soul and Body.

2. A very great abatement of that temporal Felicity he had in this Life, and obnoxious to the everlasting separation from God, with the Death of the Soul.

3. An abatement and diminution of those Habits of Knowledge and Rectitude of Soul, and a great weakning and decay of the vigour and activity of connatural implanted Notions or Inclinations.

4. A great disorder in the due subordination of his Faculties, and a great confusion and corruption prevailing upon his noble Faculties, and weakning, disordering, and abasing them.

5. An impair of that Sovereignty and Dominion over the Creatures, who rebelled against Man as soon as he forsook his Maker.

6. Diseases, Disorders, Weaknesses, Sicknesses, Harbingers and Forerunners of Death attaquing his Bodily Constitution.

7. A transmission of these Hereditary Imperfections and Decays to his Posterity.

And herein and hereby we have an Account of that great *Quæsitum* among the Learned Heathen, (where yet for want of this Discovery by the Holy Scriptures, they could never attain the full knowledge and reason) namely, the Original of Sin and Evil, and those many Corruptions, Defections, and Miseries of Mankind.

And thus much concerning the Divine History of the Creation and Defection of Man.

CAP.

CAP. IV.

The Reasonableness of this Hypothesis *of the Origination of the World, and particularly of the Humane Nature, and the great Advantages it hath above all other* Hypotheses *touching the same.*

THat the World had a beginning of its Being, at least in that order and consistence that it now holds, I have shewed in the beginning of this Book: Again, if there could be any imaginable doubt or question, whether the great Integrals of the World were eternal, and without beginning, yet I have shewed, that Mankind, or the successive Generations thereof, *ex ante genitis*, is in Nature and Reason impossible, and in Fact and Experience apparently improbable, and therefore that there were some common Parents of Mankind, who had their beginning of existence, and that in some other way than they are now produced.

All that have supposed an Origination of Mankind *ex non genitis*, have admitted something either of Matter analogous to it, out of which Mankind hath had such his Origination (which we also admit as to all his Constituents at least, but his Soul) and therefore the great Debate hath been touching the Efficient, or that Being, or Nature, (or whatever we shall call it) that first compounded, formed, and constituted the first Parents of Mankind in that essential and individual state, consonant to that specification of Humane Nature which we daily now see.

Every thing that hath a beginning of Being, must either have it from it self, or from some other active, efficient, and constituent Power or Nature, antecedent to it in time, or at least in Nature, or both.

To suppose that the Humane Nature at first constituted it self, were to suppose it to have a propriety of existence to it self, which were a palpable absurdity and contradiction, for then it should be before it was. Therefore it is necessary, that the first Origination of Humane Nature should be from some other beginning or cause antecedent to it, besides the Matter out of which it was constituted.

And whatsoever the Being or Cause originating Humane Nature was, it must be in nature of an Efficient, namely, something that did actively put together the constituent parts thereof, and formed it into that consistence and existence whereby he became Man.

We cannot by any means suppose any such Efficient or Being, or thing that did *subire rationem efficientis*, but one of these four: 1. An uncertain casual conflux of Particles of Matter that casually compounded a *Semen humanæ naturæ*, and so though the immediate *Semen*, thus constituted, may obtain the Name or Notion of the immediate Efficient, yet the true Efficient of that *Semen* (if we may be allowed to call it by that name) was Chance or Fortune. 2. An implanted blind determinate something, which we call Nature, which by a fatal and necessary connexion of surd and irrational Causes and Effects produced the first Parents of Mankind, as the like Nature by the like necessity produceth yearly Worms and Flies, and other Insects that have not their existence by univocal Seed: Both these two Suppositions have been before examined and rejected, as *impares huic negotio.*

negotio. 3. The illapſe of ſome pre-exiſtent or animating formative Principle, which we may well call the Soul or *Anima*, that as in the Generation of Mankind by ordinary procreation we ſee the formative power is ſome refined active Spirit or Soul *in ſemine delitescens*, that faſhions the Matter, and actuates it with vital ſenſible Faculties and Operations; ſo the illapſe of ſome ſuch active ſubſtance or powerful Being, illapſing into Matter and united to it, might form it into that conſtitution which it enjoyed. 4. and Laſtly, Or ſome ſuperior, powerful, wiſe, and intellectual Being, that did form, faſhion, actuate, and conſtitute the firſt Parents of Mankind.

The two former being as before laid aſide, I ſhall uſe a few words touching the third Suppoſition, of which little hath been before ſaid, and ſo paſs to the fourth and laſt and true Suppoſition of the Firſt Efficient of Humane Nature.

3. Therefore touching the third Suppoſition, concerning the production of Mankind by virtue of ſuch Illapſe of Forms, we may ſuppoſe it to be intended one of theſe two ways: 1. Either that with *Origen* we ſhould imagin a *Mundus Animarum* that had real and individual Subſiſtences: Or 2. that there were ſome common Element of animate Exiſtence, not divided into individual Exiſtences, but one common rational and vital Nature, whoſe Particles illapſing into Matter might produce ſuch firſt Exiſtences of Mankind, and ſo though in their union to Matter they do *ſubire rationem formæ*, yet they do likewiſe *ſubire rationem efficientis*, as to the formation of Mankind, as the vital Principle in the Egg becomes not only the form of the Chick, but alſo in the firſt formation thereof is the diſpoſer of its Organs and exerciſe of its Faculties, and ſo doth *ſubire rationem efficientis immediati* in the formation of the *Fœtus*.

As to both theſe in general, I ſay, 1. That they are precarious Suppoſitions, without any juſt reaſon to evidence, either that there were ſuch pre-exiſting individual Souls, or a common reaſonable Spirit. Again, 2. The Suppoſition that theſe ſhould be the immediate Efficients of the Humane Nature, is likewiſe precarious and inevident. 3. Even they that ſuppoſe either ſuch an individual or common pre-exiſting Nature, muſt be forced to ſuppoſe them eternal independent Beings, and this will have as many difficulties in it as the Eternity of Mankind; or elſe if they be ſuppoſed created Beings, yet ſtill there will be a neceſſary recourſe unto an infinite uncreated eternal Being that muſt create them. And 4. conſequently the Framers of theſe Suppoſitions do with much more difficulty and laborioufneſs form intermediate Principles of the Origination of Mankind, which with leſs difficulty and greater congruity may be reſolved into the immediate Efficiency of Almighty God, according to the Divine Hiſtory. 5. And beſides all this, if Men will needs ſuppoſe a Formation of Man by the illapſing of Souls into prepared Matter, becauſe they ſee this is the Method of Formation in the ordinary courſe of Generation now, they muſt alſo ſuppoſe the progreſs of the Formation and Maturation of the Humane Nature: This way muſt be gradual and ſucceſſive, which will be attended with all thoſe difficulties which are before obſerved in the Suppoſition of caſual or natural production of Man in his firſt Origination. But in particular to thoſe ſeveral Suppoſitions, and Firſt, touching the firſt of theſe: The Opinion of the pre-exiſtence of Souls

of

of Men, and their descent into Bodies, though it hath been countenanced by *Plato* and some that follow him, hath chiefly as it seems been entertained by some of the *Jews*, and some few *Christians*, both recognizing the true God, the Immortality of the Soul, and future Resurrection: For the ancient Jewish Opinion *vide Wisdom* 8. 19, 20. [*For I was a witty Child, and had a good spirit, rather being good I came into a Body undefiled.*] Among Christians, *Origen* much asserted this Opinion. But whatever may be said touching the truth or falshood of the Opinion it self, it can no way support the primitive Origination of Mankind by the illapsing of such Souls into elementary Matter.

First, It exceeds the power and activity of such imagined, pre-existent Souls, to form and animate Matter into the consistence of a Man without the intervention either of the immediate power of God, or at least without that instituted Method fixed by God in the Generation of Mankind *ex semine.*

And that it doth so exceed the activity of Souls thus to do, appears in this, that although there is according to that Supposition of a *Mundus animarum* a sufficient stock of existing Souls, and if there were not, yet those that once informed humane Bodies survived after the *dissolutio compositi*, and yet we never heard since the first formation of Man that any such new formation hath been made, nor any illapse of any such Soul into any other *Fœtus*, but what hath been formed according to the established Law of the successive production of Mankind *ex mixtione seminis utriusque sexus.* Nay the more considerate *Pythagoreans*, and those *Jews* that held the Transmigration of Souls, never supposed any transmigration into any spontaneous production of Man or Animal, but only into such as proceeded *ex univoca generatione*; and what hath never been done, yea never supposed to have been done, we have no reason to suppose possible to be done by any natural and finite Efficient, for such these Souls must be whether they pre-existed or not.

And therefore though in the Resurrection the separated Soul is supposed to reassume his own Body again, yet this seems not to be by any natural power residing in the Soul to form the Body and reunite it self to it, but must be attributed to that Almighty Power of the Glorious God, and to the working of His Mighty Power, whereby he is able to subdue all things to himself; and by the very self-same excess of power, whereby he first created Man upon the Earth, shall he form, raise, and reunite the Humane Nature in the Resurrection, *vid.* 1 *Cor.* 15. 1 *Thess.* 4. *Mat.* 13. *Mat.* 24. Christ the Son of God raised himself; but in the Resurrection the Dead shall be raised by the Power and Command of the Glorious God.

Secondly, It is not supposed by those, that the Souls of perfect Brutes had any existence antecedent to their first production; for their Souls are not of a self-subsisting nature, they cannot exist out of them, but begin with them, and dye with them; so these in their first production could not arise by any such *illapsus animarum* into elementary Matter, but we must attribute their primitive Formation or Creation to the Command of the Divine Will; and so if we give them any Origination, we shall upon this Supposition give them a nobler Origination, and by a more immediate interposition of the Divine Power and Will, than to that of Man, which seems unreasonable.

As to the Second, It is true the *Platoniſts* attributed an Univerſal Soul to the Univerſe, the *Anima mundi*, which though they ſometimes ſuppoſe it a created Intelligent Nature, yet in other places we ſhall find them attributing ſo great power and energy to it, that it ſeems they made it to be no other than God himſelf. But when they held their Suppoſition of an *Anima mundi* as a created Exiſtence ſubordinate to Almighty God, although they attribute many of the great Appearances of Nature, both in their production and government to this Univerſal Spirit, yet they dare not aſſert unto it the Efficiency of the firſt Original of Humane Nature by it; and if they ſhould, yet this their Suppoſition would have this flaw in it, that they take greater pains, and run the hazard of more difficulties, by ſuppoſing the Origination of Man from this *Anima mundi*, than if they ſhould with us ſuppoſe the immediate Origination by the Divine Power; neither do they gain any thing by it. But this I may poſſibly reſume again hereafter.

But the Suppoſition whereof we took notice before is this, That there is a threefold created Univerſal Nature, *viz.* a *Natura mentalis*, common to Men and Angels; a *Natura ſenſitiva*, common to Animals; and a *Natura ignea*, which is the common Principle of Vegetation.

And therefore as the *communis natura ignea* is diſperſed through the Univerſe, and by participation thereof to particles of Matter gives an exiſtence to the Vegetables of ſeveral natures, ſo the communication of the *communis natura ſenſitiva* might at firſt give an original to perfect Senſitives, as perchance it now doth to *inſecta ſponte naſcentia*; ſo the participation of the *Natura mentalis* to ſome portions of elementary Matter may alſo give the origination of the firſt Men and Women in the World.

Two things I ſhould ſay to this:

Firſt, Although it be true, that the abſtraction of the Underſtanding, ranging the Souls of living things under theſe Diſtinctions and generical Notions, hath given us the Notion of one common *Mentalis natura*, and one common *Senſitiva natura*, and one common *Ignea natura*; yet it will be hard to prove, that there are any ſuch real common Natures really exiſting, but in the Individuals thereof. We have the common Notion of *Natura animalis*, and yet never any Man could make out, that there was any *Animalis natura* but what exiſted in the Individuals, or that here ever was or can be really exiſting any Animal with it, not determined in ſome more contracted exiſtence than an Animal.

Secondly, I muſt needs confeſs there is a fair probability of Reaſon offered by many Learned Men of this triplicity of exiſting common Natures, and it carries a great analogy with many other *Phænomena* in Nature, and therefore I dare not generally deny it, though the explication of the manner of their Exiſtences, their particular Natures and Uſes, be difficult: But if it be admitted (as poſſibly it may be) that there is ſome common Element of Mental Nature, another common Element of Senſitive Nature, and another common Element of *Ignea Natura*, and that the ſeveral Ranks of Beings, Rational, Senſitive and Vegetable, participate of theſe reſpective Natures, as their common Store or Element from whence they are derived, and therefore for inſtance the Rational Soul in Man were a participation of that common Element or Stock of

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the *Mentalis natura*; yet ſtill we muſt go higher for the Origination of Mankind, for this would be no other than as it were the *Materia prima* or *communis* of the Souls of Men.

1. Either this *Natura mentalis* is indiviſible, and communicated intirely without any diſtribution of ſeveral divided parts of it to all Men, as the common Heat of the Sun is communicated to a thouſand Men together, and then all Men will have one common Soul, and there will be no individuation nor principle of individuation between Mankind, for the ſame univerſal indiviſible Soul reaſons and wills in every Man, which would be unintelligible and abſurd.

2. Or to uphold Individuation in the Perſons and Souls of Men, this common *Natura mentalis* muſt be either truly ſeveral divided Souls, with *Origen*'s *Mundus animarum*; or elſe, though this common Nature be actually one at firſt, yet it is diviſible, and potentially many: and ſo the ſeveral Souls of ſeveral Men muſt be ſo many ſeveral Particles or *Ramenta* of this *Univerſalis natura*; and either this portion thereof muſt be by the ſuperior Activity of Almighty God, or elſe it muſt have a kind of natural diviſion of it ſelf, according to the diviſion of Matter qualified and organized to receive it: If the former, ſtill there is *dignus vindice nodus*; for God Almighty muſt be called in to diſtribute and participate the portions of this Mental Nature: if the latter, then what ſhall become of the Individuation of the Soul after Death? It will return back, and be drowned as it were in the *Natura mentalis*, or be annihilated; and if it keeps its Individuation, it muſt be by the Power and Interpoſition of Almighty God.

3. But be it what it will, ſuppoſe it be the common Matter as it were of the Souls of Men, and therefore now in the ordinary courſe of Propagation, by a kind of ſetled Law in Nature may communicate it ſelf or any portion of it ſelf, to the natural productions of Mankind; yet where do we find, that either it ever did, or can of its ſelf form a Body out of Elementary Nature, and unite it ſelf unto it? Or how could that be done without the ordinary method of Generation, to diſpoſe and organize the Recipient or organized Body, or the interpoſition of a ſuperior Intelligent Nature, that muſt form and unite it; and if it ever did, or could do the ſame by its own immediate Activity, why do we not ſee the ſame thing done daily without the courſe of ordinary Generation *ex Semine*, ſince this *commune Elementum mentale* ſtill is ſuppoſed to exiſt, and of the ſame efficacy as ever it was?

4. It is obſervable, that in all theſe kinds of Suppoſitions either of one *Mundus animarum individualium* with *Origen*, or of a common *Elementum mentale*, whether diviſible or indiviſible, nothing can be done without taking in the Power of an Omnipotent God, either in the firſt Creation of theſe Souls or Elements, or in the direction, ordering and governing of their illapſes into Matter, or of the preparing and organizing of Matter in the firſt Origination of Men, or in the ſeparating or individuating of theſe Elements, or in the uniting of them to Matter, or in giving the Law, and Rule, and Inſtitution of their future Regiment, or indeed in all of theſe: And ſo Men have needleſly, and without ſufficient evidence multiplied *Entia*, and yet ſuch as are not effectual to the ſolution of the *Phænomena*, *niſi Deus interſit*; and all this plainly expedited with the ſame eaſe, and leſs perplexity and multiplicity, by the immediate Command of the Divine Will and Power in the firſt production of Things, according to the plain, explicable, and intel-

intelligible Syſtem given us by God by the hand of *Moſes*, namely, an immediate Formation of Man, an immediate Creation of an Immortal Intellectual Soul, and an immediate Union of both Parts of the *Compoſitum* by Almighty God.

5. Indeed if it be ſuppoſed that one common Mental Nature may be ſpecifically appropriate to the Humane Nature, (not taking in the Angelical) the difficulty of the ſpecification of Humane Nature by that common Mental Principle may be removed, becauſe the Humane Nature is but one *Species*; yet the Suppoſition of one common Senſitive or Vegetable Nature, as the common Conſtituent of Animals and Vegetables, leaves us under this perplexity and difficulty, namely, How from that common Senſitive Nature there ariſeth diverſity of *Species* of Animals and Vegetables; or ſince the Principles are but of one kind, how comes the *Species* to be ſeveral: And on the other ſide, if the variety of *Species* ariſe from the different modification or qualification of the Matter, How comes it to paſs that there is any fixedneſs and determination of the *Species* of Animals or Vegetables, or that they are contained and conſerved in the ſame *Species*; ſince the modifications and qualifications of Matter are various, and irregular, and infinite, neither do they keep in one fixed modification or qualification, but the ſame is hourly changed. It remains therefore, that although we ſhould admit ſuch a *Natura ſenſitiva* or *ignea*, either in ſome common Maſſes, or interſperſed and diffuſed through the whole Maſs of Elementary mixed Matter, we muſt be fain to ſuppoſe ſomething elſe that muſt determin theſe common and Homogeneal Principles into determinate *Species*; or at leaſt, that there are as many Senſitive Natures ſpecifically diſtinct as there are *Species* of Animals in the World. Theſe Suppoſitions therefore are not ſufficient to explicate the firſt productions of perfect Animals, at leaſt without multiplication of inevident and unexplicable Suppoſitions.

6. I therefore come to that true, and plain, and neceſſary Concluſion, That the firſt production of Mankind, yea and of perfect Animals, was wrought immediately by the Efficacy of an Intelligent, Wiſe, and Powerful Being, diſtinct from the things produced: and this is the great Truth that in all this Diſcourſe I aimed at, and am now arrived at.

And I ſhall not need go any farther for the evidence of this Truth, than the Contemplation of the Thing it ſelf, (Man,) in which we ſhall find ſo many clear Evidences of an Intelligent Efficient, that we need no other, and the common Inſtances will evidence the Reaſonableneſs of ſuch a Conſequence. If I ſhould behold a Houſe with ſeveral Rooms and Stories, excellently contrived with all Offices and Conveniences for Uſe, Doors, Windows, Chimneys, Stairs, and every thing placed and digeſted with Order, Uſefulneſs, and Beauty, a little Logick will induce me to conclude that it was the Work of an intelligent and skilful Architect, though I did not ſee him building or finiſhing it. If I ſhould ſee a curious Watch, curiouſly wrought, graved, and enameled, and ſhould obſerve the exact diſpoſition of the Spring, the String, the Wheels, the Ballance, the Index, and by an excellent, orderly, regular Motion deſcribed, diſcovering the Hour of the Day, Day of the Month, and divers other regular

regular and curious Motions: Or if I should see such a goodly *Machina* as some ascribe to *Archimedes*, whereby in distinct Spheres or Orbs the situation of the Elementary and Celestial World were represented, and all these put into their several Motions, consonant to that we see in the Heavenly Bodies, by the means of Springs or Weights artificially placed, I should most reasonably conclude, that these were neither Casual nor simply Natural Productions, but they were the Work of some intelligent curious Artist, that by design, intention and appropriation wrought and put in order and motion these curious *Automata*.

And certainly, if I or any Man of Reason should in this moment behold a parcel of red Clay, and in a moment should see that arise into the Figure of a Man, full of Beauty and Symmetry, endued with all those Parts and Faculties which I see in my self, and possibly far more glorious, exquisite, and beautiful; and I should observe him presently after this Formation use all the Operations of Life, Sense and Reason, and this kind of production never seen before: That common Reason which should tutor me to think that that Watch, that *Machina* before mentioned was the Work of an Intelligent Nature, would much more enforce me to believe that this admirable and stupendious production of such a Nature unexampled before, would enforce me to believe and confess that this were the immediate Work not only of an Intelligent Being, but of a most Wise and Powerful Being, that could thus in a moment frame, animate, and endow such an excellent Creature as this.

And yet certainly the first created Parents of Mankind were constitute in a Nature specifically conformable unto that Nature which Mankind now hath, and as we have no reason to believe they were any way inferior to the present Perfection of Humane Nature, so we have very great reason to suppose them constituted in a greater degree of Beauty and Perfection than the most perfect Man that hath been ever since their Formation, (except the incarnate Son of God.)

Although I do not intend in this place to take a large Survey of the Perfection of the Humane Nature, because it is in part done already, and I shall reserve it, God willing, for its proper place and season; yet because my Scope here is to evince, that the Supposition of the first production of Mankind is an unquestionable Evidence of the Existence of a most Wise and Intelligent Being; and that the strength of that Evidence rests in the due Contemplation of the Excellence of the Humane Nature and Faculties, and those other Appendices thereunto; and that it is not possible to conceive any other but an Intelligent Efficient (working by Choice, Wisdom, and Appropriation) should be the first Producent, Former, and Constituent of such a Nature. I shall take a short Survey of the Humane Nature, Perfections, and Appendices, which may give any Man a handle to improve it farther to the same end; leaving the fuller Discourse of the Humane Nature as a Reserve, also whereupon a fuller Improvement may be made of this Consideration and Conclusion.

And upon the diligent Observation of this Argument it will evidently appear, That the modelling, framing, compounding, ordering, and endowing the first Prototype and first Copy of the Humane Nature

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was neither an Act or Event of Chance, or of a Surd, Inanimate, Unintelligent Nature, but was a Contrivance and Work of Design, Skill, and Intention, a Transcript of that *Idea* which resided in an intelligent Being, a Work of a wise and powerful Being; yea such a Work as could never have been made by any less than the most intelligent, wise, and powerful Being, exceeding the more single Wisdom and Activity of any created Intelligence at least, unless acting in and by the Commission, Virtue, and Strength of the Almighty God.

Now these Excellencies in Man that demonstrate an Intelligent Efficient are of two kinds, 1. Such as immediately concern his nature: 2. Such as are distinct from it, but relating to it.

1. Therefore concerning those Excellencies that concern immediately his Nature; and these discover themselves and the Wisdom of their Efficient. And these Excellencies are considered either simply in themselves; or 2. *Compositè*, and with the several Subserviences and Accommodations to their Ends and Uses.

As to the first Consideration, there are many Excellencies in the Humane Nature which manifest a far more eminent Excellency in his first Efficient.

The Symmetry, Beauty, Majesty, and admirable Composure of his Body, to which there can be nothing added, nor detracted, without a blemish to it.

The admirable Faculties of his Soul, those that concern him in his lowest rank of Life, the Faculty by which he is nourished; those that concern him in his middle rank of Life, Soul and Sensation, Memory and Appetite; those that concern him in his supreme rank of Life, Intellect and Will; those that concern him in his whole *Compositum*, the Generative Faculty.

The admirable Union of his Soul to his Body, whereby he becomes one Intellectual Being, though consisting of Principles of differing natures.

These and such as these would be largely prosecuted, for they do evidence an intellectual, most wise Efficient, that could thus erect, and thus endow such a Fabrick. But that which I most reckon upon, is that admirable Accommodation that is found in the nature of Man, which doth most undeniably demonstrate an intellectual and wise Efficient, working by Intention and Design: for instance, It is indeed a very great evidence of an Artist that can make the Wheel of a Watch, or the Spring, or the Ballance, but the destination of the Spring to the String, and the String to the Fusee, and the accommodation of every Wheel, and their position and fabrick one to another, and the Ballance to correct and check the excess of the Motion, and the Index to the Table, and to fit the Table with Divisions suitable to the Hours, and to put all into such a regular Motion as demonstrates the Hour of the Day: This adaptation of things of various and several Natures and Structures one to another, and all to some common End or Design, is so great an evidence of an Intellectual Being that works by Intention, by Election, by Design and Appropriation, that nothing can be opposed against it: And therefore I rather choose to prosecute this compound Consideration of the Humane Nature, the adaptation and appropriation

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of things therein one to another, and to common Use; which is the most evident Argument of such an Efficient as I have before described in the first Fabrication of Humane Nature.

It were the business of a Volume to pursue all the Particulars of this kind, I shall only instance in some.

1. The admirable accommodation of the several Parts of the Humane Body to make up one *Continuum*, yet consisting of divers Parts distinct in their individuals and kinds, the mortising of the Bones one into another, the binding them together by Nerves and Muscles and Tendons, the Veins and Arteries for the carrying of the Blood diffused by several Ramifications from their Roots to the uttermost extremities of the Body, their differing Coats, *Anastomoses* and means of Communication for the Circulation of the Blood, the distributions and ramifications of the Nerves; indeed the whole Frame of the Humane Body is an Engin of most admirable contrivance and mutual accommodation of Parts, which is so much the more admirable, because many of the Parts are distinct not only in the Roots and Numbers, but in their Nature and Constitution; yet make up one most beautiful *Continuum*, by the mutual accommodation and admirable contignation of the several Integrals thereof.

2. The admirable accommodation of Faculties to the convenience and use of Humane Nature, for Instance, the Digestive Faculty to preserve Life, the Generative Faculty to preserve the *Species*; his Faculties of Sense are accommodated to a Sensible Being, for as much as he is to converse in a Corporeal World, and with Corporeal Beings, there is no one quality of Corporeal Nature that he hath occasion to use or converse with, but he hath a Faculty by one of his five Senses to receive and discern. Again, in his Intellective Faculty it admirably serves him for the Ends and Uses of his Being; he was appointed to govern, direct, and rule other Animals, and therefore he hath the advantage of a superior Faculty above them, whereby he is able to exercise that Direction and Government: He was made to be the Spectator of the great Work of God, to consider and observe them, to glorifie and serve that God that made them; and he is accordingly furnished with an Intellective Faculty answerable to his condition.

3. The admirable accommodation of Faculties with subministring Faculties, and Organs subservient, appropriate, and convenient for their exercise: For Instance, Local Motion is necessary to Mankind, and accordingly he is furnished with Animal Spirit, Nerves, Muscles, Tendons, and Limbs admirably contrived, and destined, and fitted to Local Motion. The Intellective Faculty is furnished with the organical Fabrick of the Brain, and the subordinate Power of Sense, Phantasie and Memory, to assist it in its exercise while it is in the Body: *Facultati generativæ & prolificæ subministrans facultas seminificationis, ac organa eidem deservientia, appetitus naturalis, voluptas quædam alliciens organa generationi dicata, & distinctio sexuum, sine qua juxta legem in natura post primam humanæ naturæ formationem insitam, hujusmodi speciei propagatio fieri nequivit.* The Digestive Faculty, furnishing the Blood, the Blood increasing the Body, and supplying the Treasuries of the Spirits, the Spirits again supplying and maintaining the Offices of the Faculties. So that not only the Blood,

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but the whole Corporeal and Animal Nature is in continued motion and mutual ſubſerviency.

I might be endleſs in this Contemplation, but becauſe it is evident to any Man that conſiders, and I deſign a larger diſcuſſion of this Buſineſs when I come to conſider the Parts and Faculties of the Humane Nature, I ſhall not give farther Inſtances therein.

And the Uſe that I make of it is this, That although it might be ſuppoſed poſſible, that either Chance or Nature might in ſome ſimple narrow things produce very curious Appearances, as the Configurations of *Aſterites*, of Cryſtals, of Salts in their ſeveral ſhapes; yet when in ſuch a complicated Nature as Man is, conſiſting of ſo many various Parts, various in their poſition, nature, and uſe, there ſhall be found ſuch an exact adaptation of every thing one to another, as to ſerve the whole and every part; this in the primordial Conſtitution and Formation muſt needs be the Work of a moſt wiſe, intelligent, powerful Being, that operates *ſecundùm intentionem, appropriationem, & intelligentiam.*

2. Let us come then to thoſe Appendices and relative Reſpects of other things to the Humane Nature, we ſhall eaſily find in it this Conſideration alſo, the Footſteps and Evidences of an Intelligent Nature in the Conſtitution of him, by that admirable accommodation of things without him of different nature from him, to his uſe and convenience.

In the Operations or Works of Intelligent Agents we may eaſily ſee, that according to the degree or perfection of ſuch Intelligence there is variety in their Work or Production: An Intelligent Agent that is but of a narrow Intelligence, as his Proſpect is commonly ſhort and weak, ſo his Work ſeldom attains more than a narrow and ſingle End. But if the Agent be of a large and comprehenſive Intelligence and Wiſdom, his ends are great, and moſt times various and complicated, and the ſame Operation or Work may have many and divers Ends and Uſes.

Almighty God therefore being of infinite Wiſdom and Power, foreſees and effects great and various Ends in one and the ſame Work or Operation: Take for Inſtance that goodly Creature the Sun, What a complication of excellent Ends and Uſes there are in that glorious Body? It is the Fountain, communicating Light to the Earth, the Air, and all the Planetary Bodies; it is that which derives Heat, and is the great Inſtrument of deriving Fruitfulneſs and Fertility to the inferior World; it diſtinguiſheth Times and Seaſons by its Motion; it raiſeth, and digeſteth, and diſtributeth the Watry Meteors for the benefit of this inferior World, and infinite more advantages of this kind. And therefore it is the narrowneſs of our Underſtanding, that when we ſee one excellent End or Uſefulneſs in any thing, to conclude, that God Almighty intended no other.

And therefore it is too haſty and vain a Concluſion, to think that the glorious Bodies of the Celeſtial Hoſt were made meerly for the ſervice of Man; and it is alſo folly and preſumption to conclude, that even the things of this inferior World, though principally deſigned for the uſe of Man, were meerly and only deſtined for the ſervice of Man: Almighty God hath the Glory of his own Greatneſs, and the Communication of his own Goodneſs, as the great End of all his Works: Yea and we have reaſon to think, that even in theſe inferior Beings of this lower World

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which are delivered over to the use and service of Men, God Almighty had other Ends that possibly we know not, nay possibly in the Effection of the least minute Animal Almighty God intended a Communication of so much of his Goodness and Beneficence to it, as might give it a kind of complacency and fruition suitable to the capacity of its Existence, though subordinate to other Ends.

And yet not only in these inferior Existences of this lower World, but even in the Fabrick, Order, and Oeconomy of the superior World there is to be found an admirable accommodation of them one to another, and to this Steward and Tenant of Almighty God of this inferior World, called Man.

1. If we look upon the Celestial World, we have an admirable accommodation thereof to the convenience of Mankind; it presents to his View, and thereby to his Understanding, the most noble Spectacle of the Celestial Bodies, their Order, Beauty, Constancy, Motion, Light, conducting to the knowledge and acknowledgment of the Power, Wisdom and Goodness of God: it gives him an account of the progress, and parts, and succession of Time; these are advantages that no Irrational Nature can make use of.

But the Influence of the Heavens are a common Benefit to Man and all Sublunary Natures; but yet the inferior World seems in a great measure directed for the benefit of Mankind; some in common to him and the Brutes, as the Air for Respiration, the Fire for Warmth, the Water for Drink, the Earth for Fruit and Habitation.

But in this lower World there seems many things directed to the special use of Mankind; for besides Domestick Animals especially allowed for his Food, there are some that serve for his Employment, Motion, Exercise, and Food, as the Tillage and Planting of the Earth for his Food; some for his Medicine, as Herbs, and Gums, and Minerals; some for his Clothing, as the Furrs, Wool, and Skins of Beasts; some for his Habitation, as the Timber and Stone; some for his Fewel, as Wood, Coals, and Turf; some for his Defence and Manufacture, as Iron and Steel; some for Commerce, as the Metals of Silver, Gold, Copper, the very Situation of the Seas, the *Magnes*; some for his Ornament, as Silk and Jewels; some for his Journey and Labour, as Horses, Oxen, Camels; some for his Necessity, some for his Delight: Infinite more Instances may be given, whereby it will evidently appear that this lower World is accommodated to the use and convenience of Mankind in a special and remarkable manner; whereby it may be evident to any considerate Man, that the Formation of the World and of Mankind was by the same wise and provident Power; and that as the Humane Nature is accommodated to it self, so this World is accommodated to the exigence and convenience of the Humane Nature.

When I have considered the admirable Congruity of all the Parts of Christian Religion, and how it corresponds, and is adapted to the convenience and condition of the Humane Nature, and how those antecedent Propheſies, Promises, and Directions of Religion in the Old Testament, bear an admirable congruity to the Model of Religion in the New Testament, notwithstanding the vast distances between the manifestations of them, and how all the Scheme of Divine Dispensations

from the beginning of the World bear an admirable accommodation each to other, and to the Evangelical Doctrin; it gives us a ſtrong Moral Evidence that the ſame one God was the Author of this Religion, that although there ſeem a diverſity and variety in the Adminiſtrations, yet when I look upon them together, compare the congruity of what goes before to what follows, it ſeems one moſt beautiful Piece, fitted and accommodated in every part to the other; and hereby I ſatisfie my ſelf that it is the true Religion, that it is all of one piece, and one common Author of it, namely, the God of Truth.

And ſo when I conſider the Humane Nature, and the admirable accommodation that one part thereof hath to the other, and alſo look upon the *Mundus aſpectabilis*, eſpecially this lower World, wherewith we are by reaſon of its vicinity beſt acquainted, and obſerve how admirably the ſame is accommodated to the Animal Life of Man: And although the Parts thereof are diſtinct, various, diſtant, yet there are drawn from it Lines of Accommodations and Communication to the Uſe of the Humane Nature, ſo exactly and appoſitly, that I cannot chooſe but acknowledge one common Author both of the greater and leſſer World, and ſuch an Author, as made and diſpoſed all things by the higheſt Wiſdom and the wiſeſt Choice. If there had been divers Authors of the greater and leſſer World, there could never have been an accommodation of things ſo diſparate one to another, unleſs both had acted in ſubordination to one common third Being, or by one common Counſel.

Again, it was not poſſible that Caſualty or Chance could have accommodated things of various kinds one to another: If Chance could make a Beam of a Houſe, and could have made Tenents at either end, yet it is not poſſible to conceive that Chance could caſt it to be juſt of a fit length to anſwer the congruity of its contignation to another piece of Timber, or fit the Mortiſes of other pieces of Timber to thoſe Tenents, or fit the particles and ſcantlets to anſwer juſt one another; this muſt of neceſſity require a Workman that works by Underſtanding, Choice, and Appropriation, becauſe it requires accommodation of ſeveral things of ſeveral kinds to one End by ſeveral Means.

Thus therefore when I ſee the admirable accommodation of Humane Nature to its own exiſtence and conveniences, the admirable accommodation therein of things of different natures one to another, as Organs to Faculties, Sinews to Bones, Nerves to Muſcles, Spirits to Nerves; when I ſee the excellent accommodation of this lower World, eſpecially to the Humane Nature, although they are in themſelves ſeveral and heterogeneal, I cannot (without violence to my own Obſervation, Experience, and Reaſon) I ſay I cannot but attribute the firſt Formation of Humane Nature, yea and of all the Univerſe, to one moſt Wiſe, Intelligent, Powerful Being; who did all things according to the counſel of his Will, after the moſt wiſe and excellent *Idea* of his unſearchable Underſtanding.

CAP.

CAP. V.

Concerning the Nature of that Intelligent Agent that first formed the Humane Nature; and some Objections against the Inferences above made, and their Answer.

HAving in the foregoing Chapter reduced the Origination of Mankind to an Intelligent Efficient, effecting it *per modum efficientis voluntarii, & per intentionem*, I shall in this place inquire what kind of Intelligent Efficient this was, for among Intelligent Beings there is one *Primum*, the Glorious God, whose Understanding, Power, and Goodness is infinite; there are also acknowledged by the Heathen, *Intelligentiæ à primo*, those which *Aristotle* calls by the Name of Separate Intelligences, *Plato* calls *Dii ex Diis*, and we commonly call Angels, very glorious and powerful Creatures, which *Plato* takes into the Business of the Creation of Man, as to the Corporeal Frame.

And it seems to be, that the Effection of the Humane Nature in any part thereof, is not attributable to the Angels, neither as instrumental, much less as principal Causes.

1. As to the Soul of Man it seems beyond dispute, for that was a created Substance, and Creation of any new Substance being an infinite Motion, is not within the power of any Finite Nature: the Pretence therefore rests only as to the Corporeal, or at least Animal Nature.

2. Therefore I say that the Formation of the Bodily, much less the Animal Nature of Man, in order to the reception of the Soul, was neither coordinately nor instrumentally the Work of Angels. And the Reasons that seem sufficient to make out this Truth, are these:

1. It seems utterly above an Angelical Power to organize the Body of the Humane Nature: for though it is true, that in the established way of Generation, the Parents, who are inferior in nature to Angels, do organize the Body, at least *mediante semine*, yet that is done in the virtue and strength of the Ordination and Institution of Almighty God: So that as well Man as the *Semen genitale* are the Instruments deputed by Almighty God in virtue of his Supreme Power to propagate the Humane Nature. And therefore since the first Formation of the Humane Nature was a new Formation, not according to the Laws established after in Nature, the first Production of Mankind was immediately by the Almighty Power, and not by the Power of any subordinate Intelligence.

2. Again, it could not possibly be, but that the Humane Nature must be completed in an instant: For how is it conceptible, that first there should be *Corpus formatum*, with all the Organs, Vessels, Blood, and Spirits disposed and ordered in their several Cells and Motions, unless Man had been then at the same time animated as well as organized? For the outward shape or stature of a Man is no more a fit Receptacle of an Animal, much less of a Rational Life, than a Statue of Wax or Stone. The same Hand therefore that animated, formed and fashioned also the

ſame Humane Body in the ſame moment, by virtue of the Volition, Determination, or *Faciamus* of the Divine Will.

3. As we have no manner of evidence of the Angelical concurrence or inſtrumentality in the Formation of Man or of any of the lower Animals, ſo there is no neceſſity at all of ſuch a Suppoſition. And we are not to multiply Cauſes without neceſſity, for as the bare determination of the moſt powerful and efficacious Will of God was ſufficient to bring Being out of Nothing, ſo the like determination of the ſame Will was ſufficient to form Man out of the Duſt of the ground, without taking in a ſubordination or inſtrumentality of Angels.

Again, if we ſhould ſuppoſe the cooperation of Angels in the Formation of the Body of Man, it muſt be in the ſtrength, virtue, and efficiency of the firſt Cauſe, which as it gave the Angels their Being, ſo it muſt give them the efficacy, power, and virtue to be inſtrumental in this Formation; which as we have no warrant, ſo we have no probable reaſon to admit, ſince the firſt Cauſe was all-ſufficient for this Effect without their aſſiſtance.

4. The admirable Structure of the Body of Man, the accommodation of it to Faculties, the furniſhing of it with Faculties accommodate to it, even as its Animal Nature (though we take not in the reaſonable intellectual Soul) imports in it a Wiſdom, Power, and Efficacy above the Power of any created Nature to effect: If it ſhould be in the power of an Angel, by applying actives to paſſives, to produce an Inſect, nay a perfect Animal, yet the Conſtitution and Frame of ſo much of that in Man that concerns his Animal Nature were too high a Copy for an Angelick Nature to write, unleſs thereunto deputed and commiſſionated by the Infinite God, which Commiſſion we no where find, and I am very ſure a bare Naturaliſt will not ſuppoſe.

5. Again, there is that neceſſity of a ſuitableneſs and accommodation of the Parts of the Body to the Faculties of the Soul, and *è converſo*, that any the leaſt diſproportion or diſaccommodation of one to the other would ſpoil the whole Work, and make them utterly unſerviceable and unapplicable one to the other. It was therefore of abſolute neceſſity that the ſame skill and dexterity that was requiſite to the firſt Formation of the Soul, muſt be uſed and employed in the Formation of the Body; and if an Angel were unequal to the making up and ordering of the Soul, he could never be ſufficient to make a fit organical Body exactly ſuitable to it.

Upon the whole matter I therefore conclude, That not only the Soul, but the very Animal Nature in Man, and not only that, but the Formation and Deſtination of his Bodily Frame, was not only the Work of an Intelligent Being, but of the Infinite and Omnipotent Intelligent Being, who in the ſame moment formed his Body, and organized it with immediate Organs and Inſtruments of Life and Senſe, and created his Intellectual Nature, and united it to him, whereby Man became a living Soul.

And this, as the neceſſary Evidence of Reaſon, doth firſt drive us to acknowledge a Being, or firſt Formation of the Humane Nature *ex non genitis*; and ſecondly, to acknowledge that this firſt Formation of the Nature of Man was not by Chance, Caſualty, or a meer Syntax of

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Natural Causes, but by an Intelligent Efficient; so we are upon the very same and a greater Evidence of Reason, driven to acknowledge that Itelligent Efficient to be the Great and Wise and Glorious God, no other Cause imaginable being *par tali negotio.*

And indeed, if once we can bring Men but to this one Concession, That the original Efficient of the Humane Nature was an Intelligent Being, any Man pretending to Reason will with much less difficulty admit that Efficient to be the Almighty God, than any other invisible, intelligent Efficient, which we usually call Angels or Intelligences: And the Reasons are these, 1. Because though we that are acquainted with the Divine Truths do as really believe that there are Angels as well as Men, yet the Natural Evidences of the Existence of Almighty God are far more evident and convincing, even upon a Rational and Natural account, than that there are Angels; for the former being a Truth of the highest moment and importance to be believed by all, hath a proportionable weight and clearness of evidence, even to Natural Light, more and greater than any other Truth: And hence among the *Jews* the Sect of the *Sadduces* believed the Existence of God, yet denied or doubted the Existence of Angels or separated Intelligences. 2. Because the very Supposition of an Angelical Nature doth necessarily suppose the Existence of a Supreme Being, from whom they derive their Existences. 3. Because the great occasion of Infidelity in relation to Existence of Almighty God is, that sensual Men are not willing to believe any thing whereby they have not a sufficient Evidence, as they think, to their Sense: The Notion of a Spiritual and Immaterial Being is a thing that they cannot digest, because they cannot see or by any Sense perceive it, nor easily form to themselves a Notion of it. He therefore that can so far master the stubbornes of Sense, as to believe such a Spriritual Intelligent Being as an Angel, hath conquered that difficulty that most incumbers his belief of a God, and we that can but suppose or admit the former, cannot long doubt of the latter. He therefore that can once bring his thoughts to carry the first Origination of Mankind to the efficiency of an Angel, must needs in a little time see a greater evidence not only to believe a Supreme Deity, but to attribute the Origination of Mankind and of the goodly Frame of the Universe to the Supreme Being; as necessarily best fitted with Power, Wisdom, and Goodness to accomplish so great a Work, and that without the help or intervention of Angels or created Intelligences, who must needs derive their Being, Power, and Activity from him.

There remains two or three Objections against the force of the Consequence of the Existence of Almighty God, and his Efficiencies in the production of Mankind in their first Individuals, which I shall propound and answer.

1. *Object.* What need there be laid so great a stress upon the Primitive Formation of Man, as that it could not be done but by the Power and Wisdom of an Almighty Intelligent Being: since every day's experience lets us see, that by the mixture and coition of Man and Woman, *Et ex semine ab utroque deciso, in utero muliebri per spatium decem mensium ad plurimum producitur hujusmodi natura humana, quem tot elogiis magnificamus;* that which we every day see to be an effect of finite Creatures in the daily

daily production of Individuals of Humane Nature: Why must we needs call in no less than the Wisdom and Power of God himself, to be the immediate Efficient of the first Formation of the Individuals of that nature, which we see every day produced by the common efficacy of Nature and efficiency of the Parents; *Vel ad minus, seminis utriusque sexus in utero fœmineo concluſi?*

In Answer hereunto, I shall not at this time or in this place enter into the dispute how far the Divine Efficiency concurrs immediately in the ordinary Generation of Mankind, nor how far the entire Humane Nature, as well his Rational Soul as his Body and Animal Nature, is attributable to Parental Generation, these will be proper for another place: but for a full Answer hereunto I say, 1. That there is not the same measure to be taken of the competency or sufficiency of an Efficient in the production of the Humane Nature, as it stands now established, and in the first formation of the first Individuals of that nature *ex non genitis.*

It is true, it is in setled and established Nature, within the compass of the immediate efficiency of both Sexes, *& seminis prolifici ab eisdem deciſi,* to form the Humane Nature in that gradual process and method that is now consonant to Nature; but if all the Men on Earth and Angels in Heaven should now go about to form the Humane Nature *ex non genitis*, either out of the Elementary Material, or by the help and direction of the Celestial Influences, or by any Irradiation even from an Angelick Nature, it could not be done: It was therefore a vain piece of madness in *Paracelsus* to pretend to the formation of a *Homunculus*, when by all his pretended Skill he could not protract his own Life, being already constituted to the common period of an ordinary old age. But 2. This *Potestas generativa* in the Humane Nature is part of that admirable Efficiency which Almighty God exercised in the first Formation of Mankind and of other perfect Animals; and this Faculty is performed in the Humane Nature, and traduced from one to another by the immediate efficacy, virtue, and energy of that first Divine Efficiency. In this Generative Faculty therefore though the Parents are not simply passive Instruments, the *Semen prolificum* is not meerly a passive Instrument in the production of Humane Nature; yet both are Instruments, and *Efficientes vicariæ & subordinatæ*, in respect of Almighty God; and the activity that either of these Instruments have, they have from that God that first formed the Humane Nature, and implanted and alligated this activity to them. In the first formation of the first Individuals of Humane Nature this *Vis prolifica* was immediately constituted in them by Almighty God, with power not only to produce their kind, but to transmit this *Vis prolifica* to those they so produced: and although the immediate production now seems to be by the immediate efficiency of the Parents, and their prolifick *Semen*, yet it is done by virtue, and in the power of the first efficiency of Almighty God; *Qui cum hanc indidit primis individuis in eorum prima formatione, ac perpetua quadam lege succeſſivis individuis quaſi alligavit & connexit.* So that as when I behold a Man at this day, his corporeal Figure, his Faculties, I see but as it were a Copy or Transcript of the first created nature of Man in the first Individuals, I mean as to their Essentials; so I look upon the successive

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Generations of Mankind, to be but a continuation of that first generative Faculty concreated with the first Man, and protracted or extended unto all succeeding descendents from him: And therefore I have all the reason imaginable, when I behold the successive Generations of Men, and the actuating of that Faculty, *retro trahere ad primam originem*; and to acknowledge it to be no less the Efficacy of the Divine Efficiency in the thousandth Generation from *Adam*, than it was in *Adam* himself: Just as if I should take a Wedge of Silver of one Inch square, and gild it over with Gold, and should after draw it by Art into a Wire as small as a Hair, to a Mile in length, every Inch of that silver Wire hath the very same tincture which the first Wedge had: Though this resemblance holds not in all things, it serves to explicate what I mean, namely, the *Facultas generativa*, which was by God Almighty given to the first Parents of Mankind, and was bound to their *Species*. And though it be now at a remoter distance from its first efficiency, yet it hath its continuance and efficacy by virtue of that First Efficiency, and the Institution and Ordination of that most Wise and Powerful Being. So that even at this day the univocal generation of Man (yea and of all perfect Animals) is no less the Efficiency of Almighty God than it was in the first production of it, though it be more remote in respect of the intervenience of more successive instrumental Causes. And therefore we are mistaken, if we think that the generation of Men or Animals is purely by virtue of the instrumental Causes, without regard to the first Efficiency of Almighty God; which though it perpetuates it in a setled regular way, now called therefore Natural, yet it is by the Force, Virtue, and continuing Energy of the first wise, powerful, and efficacious Institution of Almighty God. And so nothing is gotten by this Objection, but to re-mind us to acknowledge and admire the admirable Wisdom, Power, and Goodness of God, in the first establishment and continued protraction of this Law of Seminal Propagation.

And this is the true reason of the constancy and fixedness of the Methods of Generation, and why they do not *transire ultra limites*; why those Animals that are produced *per ovum*, do not, cannot produce viviparous, as Birds, and some sorts of Fishes; and why those that produce *vivipara*, or *per vermem*, do not produce *per ovum*; why without extreme accidents all perfect Animals produce Individuals conformable to their own similitude, and specifick nature and likeness; namely, this is the true reason, In the first formation of the Individual of these *Species*, the most Wise God, who foresaw what was most fit and convenient, did engrave these several Laws and inviolable Constitutions in the natures of the things first produced, and chained and connected them to their *Species* by an inviolable Law, not regularly changeable by any Power but by his Power that Enacted them: And therefore it is not in the power of an Angel to alter the established Method of the Generation of things, because it is a Law instituted by the Supreme Lord. And although Monstrous Births may casually arise, as in due time may be observed, yet the production of *vivipara per ovum*, or of *ovipara per vermem*, or of Men or perfect Animals, *aliter quam per conjunctionem maris & fœminæ*, are prohibited by the setled and fixed Laws established by the God of Nature in the first formation of Individuals.

2. *Object.*

2. *Object.* You lay much ſtreſs upon the admirable Fabrick not only of Man but of perfect Animals, the regular and excellent order and compoſure of their Parts, the accommodation of their Organs to their Faculties, and of their Faculties to the convenience of their Nature: and yet there is ſcarce the ſmalleſt Inſect but hath the ſame Faculties and Organs as exquiſitly accommodated to their uſe as the greateſt Animal, nay they are ſo much the more curious, and the Art of the Artificer ſo much the more commendable by how much the ſmaller they are. If a Flea or a Fly hath as exact a ſymmetry, organization, and diverſity of Faculties as an Oſtridge or an Elephant; the curioſity of the Art is more admirable by the ſmalneſs of the Volume: And yet theſe do every day ariſe ſpontaneouſly, and it may be propagate their kind after their ſpontaneous production, or it may be have only the exiſtence of a Day; neither is it reaſonable to think that all theſe Inſects thus ſpontaneouſly ariſing, were firſt produced in the fifth or ſixth Day; or that the *Semina formata* of every Worm or Fly that hath ariſen this day or yeſterday, were created in the firſt Creation of things, and lay concealed and unactive for above 5000 Years; and yet in theſe *ſponte nata* we ſee no neceſſity nor evidence of any immediate Divine Efficiency, for ſome are every day produced *ex putri, ſine præexiſtente ſemine.* Why therefore is ſo much weight laid upon the firſt Origination of Man or perfect Animals, as if it muſt needs require the immediate interpoſition of Almighty God, when we are content to referr the Origination of Works poſſibly of as wonderful a fabrication as many at leaſt of perfect Animals, to a lower Cauſe?

I Anſwer, It is true that there is a great curioſity in the Texture and Faculty of Inſects, and that there are very many that ariſe not *ex præexiſtente ſemine*, but either of Vegetables, or of that which we uſually call *Materia putris*; and it will be too hard a task for any to maintain that all Inſects do ariſe of univocal Seeds derived from their own *Species*, or that all the *Species* of Inſects were created the fifth or ſixth Day; neither ſhall I with *Scotus* affirm that the Forms of ſuch Inſects are derived from Heaven, and diffuſed into Matter, whereby they mould themſelves into their diſtinct Exiſtences.

But as the God of Nature gave a ſeminal prolifick power to perfect Animals and unto Men, and did bind and connex this Method of their future Generations unto their Nature, without which though they had been conſtituted otherwiſe in a moſt perfect Conſtitution, they could never have multiplied their kind. So as to the production of many Inſects, Almighty God hath given ſuch a prolifick nature to the Earth and Waters, in a certain due mixture irradiated and influenced by the Sun to produce divers ſorts of Inſects by virtue of theſe two great Benedictions given to the Water, *Gen.* 1. 20. and to the Earth, *Gen.* 1. 24. as the two great prevailing Elements in ſpontaneous generations; and as by virtue of the Divine Benedictions given to Animals and Men, [*Increaſe and multiply, and repleniſh the Earth and the Waters*;] *Gen.* 1. 22, 28. ſo by virtue of that firſt Command to the Waters and Earth, [*Let the Waters bring forth abundantly the moving creature that hath life; and let the Earth bring forth the living creature after his kind, and the cattel and creeping thing, and the beaſt after his kind.*] The ſpontaneous propagation of

Inſects

Inſects by the Earth is by virtue of this Command as effectual, and in its kind as natural by virtue of this eſtabliſhed Law, as the production of Animals *per mixtionem*, though not ſo perfect.

And from the Efficacy of this Divine Inſtitution it comes to paſs, 1. That their Textures and Faculties are curiouſly diſpoſed; for the Elementary Nature in conjunction with the Heavenly Influence doth produce them as Inſtruments, and in the virtue of the firſt Inſtitution of the Glorious God. 2. That though there is a great variety and multiplicity in their *Species*, yet they are not infinite, but determinate. 3. That according to the variety of Climates and various diſpoſition of Matter, Inſects are variouſly produced: this Climate produceth that Inſect that another doth not; and this Herb, this Wood, this Fleſh, that Inſect that another doth not; and the ſame is obſerved in Herbs and ſpontaneous Plants.

And hence it is, that all the Art in the World can never make the meaneſt Inſect out of any other Matter, or any otherwiſe diſpoſed, or any otherwiſe irradiated, than what would of it ſelf naturally produce an Inſect of that kind: But this ſhall be farther illuſtrated in the Anſwer to the next Objection.

But although it be true that theſe little Inſects diſcover the wonderful Wiſdom and Power of God, in their vicarious productions by the commiſſionated and influenced Elementary Nature, yet they come exceedingly ſhort of thoſe perfect Animals who have a nobler and more elaborate production by univocal generation, and infinitely ſhort of the excellency of the Humane Nature: And therefore there is no parity of Inſtance in the firſt formation of an Inſect *ex non genitis*, and the firſt formation of the Humane Nature: Every Year gives us Inſtances of a new ſpontaneous production of Inſects, and this by virtue of that primitive commiſſion and vital vigour thereby concredited to the Earth and Waters irradiated by the Sun. But never any Age gives ſo much as a ſhadow of an Inſtance of the production of any perfect Animals, much leſs of Man by any ſuch ſpontaneous Method; and that the latter gives a greater and more eminent *Specimen* of a Divine Power in its primitive formation, than the former in its ſpontaneous production.

3. *Object.* It is evident that the malignant Spirits have power to produce Inſects, as appears by the Magicians producing of Frogs in *Ægypt* by their Enchantments, *Exod.* 8. 7. and therefore the reſolution of the ſpontaneous productions of Inſects into the Energy of the Divine Command ſeems unwarrantable. And if he may produce thoſe which are really endued with an Animal Life, why not thoſe Animals that have their ordinary production by univocal Generation, and why not alſo Mankind.

And the Satyrs and Fauns whereof ſome of the Ancients write, ſeems to be productions out of the common road of humane production.

I Anſwer, 1. Touching the ſuppoſed Fauns and Satyrs, they were either Fables or Illuſions, and no credit to be given to the Hiſtories of them. 2. Admitting it ſhould be within the power of good or evil Angels to produce Inſects, yet it would be no conſequence from thence to their efficacy of producing perfect Animals, much leſs Humane Nature, which is in another ſuperior rank of Being above the nobleſt

Brutes, and exceſſively above the rank of Inſects: We might as well conclude, becauſe a Man can make a Candle he can make a Star. But 3. As to the efficacy of good or evil Angels in effecting of Inſects, 1. It is of no great difficulty to ſuppoſe that good or evil Angels may bring or tranſport the *Semina* or Spawn of Inſects to other places, and poſſibly thus it might be done by the *Egyptian* Magicians. 2. It is very true, that the Angelick Natures have a very great knowledge of Natural Efficacies and Virtues, and a great power of tranſporting, uniting, and applying Actives to Paſſives; whatſoever therefore is effectible by the moſt congruous and efficacious application of Actives to Paſſives, is effectible by them. And ſince there are many Inſects that ariſe by the connatural efficacy of Elementary Matter, and by the due preparation of the ſame, and by the due application thereof unto the incidence of Celeſtial Heat and Influxes; it may be in the power of theſe knowing and active Spirits, by a tranſportation and application of ſuch Matter, and by the poſition of them in ſuch an Influence as is natural for their production, to be inſtrumental not only to the acceleration of ſuch productions, but to the productions themſelves: But though ſtill the efficacy of the production is not applicable to the efficiency of theſe Spirits, but to the natural vigour of thoſe Natural Actives and Paſſives that are by them brought together, and they cannot produce a Fly or a Frog beyond the activity and efficacy of Elementary Matter and Celeſtial Heat: (And hence it was, that the *Egyptian* Enchanters could produce Frogs out of the Rivers of *Egypt* by the aſſiſtance of evil Spirits, becauſe the Waters and temperament of the Soil and Climate was able to have done it, if thoſe parts thereof were tranſported and united unto one place, where being brought they would probably without the help of a Magician have been formed into that Inſect:) Yet when the ſame Artiſts were trying to produce Lice out of Duſt, a Matter ſimply unſuitable for ſuch a production, they could not effect it, but acknowledged it was the Finger of God: *Exod.* 8. 18, 19. We ſee that Man by his little narrow skill and power, by applying Actives to Paſſives, may do things of not unlike a nature; as the acceleration of the growth of Seeds by Mineral Preparations, the production of Mites in Cheeſes by infuſing Wine; and many tell us of a ſtrange production and multiplication of ſome Inſects by the juxta-poſition of ſeveral Aſhes and Solutions of Inſects, and by other means: none of which ways are eſtranged from the knowledge of thoſe experienced Spirits.

But it ſeems utterly beyond the power of any Created Nature to produce any Inſect, but by the juxta-poſition and application of that Elementary Body and Celeſtial Heat that is natural and proper for ſuch a production: and much more is it impoſſible for any Created Power to produce any Animal, though never ſo ſmall or inconſiderable, whoſe production is by the ſtanding and fixed Laws of Nature mancipated and chained to that common Method of Production ſetled in Nature, by the Conjunction of Sexes.

And therefore, though an evil Angel may produce a Frog or Snake by the due application of Actives to Paſſives, as before is declared, yet he cannot with all his power and skill produce a Dog or a Cat, or any other Creature that by the Laws and Inſtitution of Nature is only producible by the Conjunction of Sexes. And

And the reaſon is, becauſe theſe Laws which are inſtituted and ſetled in Nature when it is fixed and eſtabliſhed, are no other than the Laws of the Sovereign Lord of Heaven and Earth; and although he may diſpenſe with, alter, or ſuſpend his own Laws, yet no created Being hath that power of it ſelf to ſuſpend or alter theſe Laws ſetled by the God of Nature, no not in any one individual thing; and therefore it is not poſſible for Angel or Devil, without the immediate Commiſſion from the God of Heaven, to make any ſpontaneous production of ſuch an Animal as by the eſtabliſhed Law of Nature is to be produced by natural propagation, and not otherwiſe.

But herein I do not underſtand, 1. Such Inſects as though producible by Propagation, yet are naturally likewiſe producible *ex putri*, as Frogs, and many other Inſects; for Nature hath allowed them both ways of production. 2. Neither of Incubation; for many Animals that are *ovipara*, and cannot produce *ovum fœcundum ſine utriuſque ſexus natura*, yet may be excluded by artificial Incubation as well as natural; this is not only within the power of Angels, by applying an artificial Heat, but even of any elſe. The Eggs in *Egypt* are hatched in the Sun, or by the heat of Ovens or warm Aſhes.

CAP. VI.

The Reaſonableneſs of the Divine Hypotheſis *touching the Origination of the World, and particularly of Man, and the preference thereof before all the other precedent Suppoſitions.*

UPon a diligent Obſervation of the various Suppoſitions and ſpecial Methods of the ancient Philoſophers, touching the Origination of Mankind and of the Univerſe in general, theſe improbabilities of their truth and ſufficiency will appear to any conſiderate Man. Firſt, They are deſtitute of any ſatisfactory Evidence, to any perſon that is not ſtrangely and impotently engaged to them, either becauſe they are his own Conceptions, or the Conceptions of ſome perſons of whoſe Learning or Wit their Diſciples or Followers are too fond admirers. There are commonly two Ingredients that make Men fond of a pre-conceived Opinion: 1. Self-love and admiration; when a Man hath faſhioned a Fancy or Imagination to ſome height, he falls in love with it becauſe it is his own, and is with great difficulty drawn from it. 2. Affectation of Eſteem, which hath a double effect upon Men, namely, the affectation of Praiſe and Vain-glory, as having found out ſome Conception ſingular, novel, or that may give a Man a name of a high Mercurial Wit; and on the other ſide, a ſhame and diſdain to retract that which he hath once publickly aſſerted.

The truth is, that many of the ſeveral *Hypotheſes* of the *Ariſtotelians*, *Epicureans*, and of divers of the other Ancients touching the original or fundamental ſtate of the Univerſe and Mankind, are meer Inventions and Fancies, having no other foundation or evidence of their truth, than meerly

their own Fancies and Conceptions. And it is not reasonable to think it should be otherwise; for since the Manner of the Origination of Things must in common Reason be thought to be of some other Mode or Order than what we see now in Nature, and since the particular Manner or Method of this Origination of Things is such a Matter of Fact as cannot possibly lye in the compass of humane discovery meerly by the strength of Ratiocination or a bare humane Tradition, (for it is a Matter of Fact that precedes the supposed existence of Memory, at least of any Man) it must necessarily be that Mankind must be ignorant of it, unless it be revealed unto him by some that might certainly know the Fact it self, and therefore the Conceptions of Men touching it must needs be as confused, roving, uncertain, and inevident, as the Discourses or Conceptions of a blind Man that never saw, touching Light or Colours.

But the *Medium* of the discovery of the first Formation of things delivered by *Moses*, is that which can only give us a true Notion of them, namely, Revelation to a Man that conversed with Almighty God face to face, and the Communication thereof to Mankind by this Man divinely inspired, and informed touching this Fact by him that alone could give him the true account thereof, namely, God himself. Although I do not doubt, but besides this Divine Revelation to *Moses*, there was a Divine Manifestation thereof to the first created Man in that fulness of his first illuminated and perfect state of created Nature, and from him that Tradition was derived, and preserved in that Line of the Patriarchs in which the most important Divine Truths were conserved, and traduced from *Adam* to *Moses*.

That which may illustrate my meaning, in this preference of the revealed Light of the Holy Scriptures touching this matter, above the Essays of a Philosophical Imagination, may be this: Suppose that *Greece* being unacquainted with the curiosity of Mechanical Engins, though known in some remote Region of the World, an excellent Artist had secretly brought and deposited in some Field or Forest some excellent Watch or Clock, which had been so formed, that the original of its Motion were hidden, and involved in some close contrived piece of Mechanism, that this Watch was so framed that the Motion thereof might have lasted a Year, or some such time as might give a reasonable Period for Philosophical Conjectures concerning it, and that in the plain Table there had not been only the description and indication of Hours, but the configurations and indications of the various *Phases* of the Moon, the Motion and Place of the Sun in the Ecliptick, and divers other curious indications of Celestial Motions; and that the Scholars of the several Schools of *Epicurus*, of *Aristotle*, of *Plato* and the rest of those Philosophical Sects, had casually in their walk found this admirable *Automaton*, what kind of work would there have been made by every Sect, in giving an account of this *Phænomenon?* We should have had the *Epicurean* Sect have told the by-standers according to their pre-conceived *Hypothesis*, that this was nothing else but an accidental concretion of Atoms, that haply faln together had made up the Index, the Wheels, the Ballance, and that being haply faln into this posture, they were put into Motion. Then the *Cartesian* falls in with him, as to the main of their Supposition,

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but tells him, that he doth not sufficiently explicate how this Engin is put into Motion; and therefore to furnish this Motion there is a certain *Materia subtilis* that pervades this Engin, and the moveable parts consisting of certain globular Atoms apt for Motion, they are thereby and by the mobility of the globular Atoms put into Motion. A third, finding fault with the two former, because these Motions are so regular, and do express the various *Phænomena* of the distribution of Time, and of the Heavenly Motions; therefore it seems to him, that this Engin and Motion also, so analogical to the Motions of the Heavens, was wrought by some admirable Conjunction of the Heavenly Bodies, which formed this Instrument and its Motions in such an admirable correspondency to its own existence. A fourth, disliking the Suppositions of the three former, tells the rest that he hath a more plain and evident Solution of the *Phænomenon*, namely, the Universal Soul of the World, or Spirit of Nature, that formed so many sorts of Insects with so many Organs, Faculties, and such congruity of their whole Composition, and such curious and various Motions as we may observe in them, hath formed and set into Motion this admirable *Automaton*, and regulated and ordered it with all these congruities we see in it. Then steps in an *Aristotelian*, and being dissatisfied with all the former Solutions, tells them, Gentlemen, you are all mistaken, your Solutions are inexplicable and unsatisfactory, you have taken up certain precarious *Hypotheses*, and being pre-possessed with these Creatures of your own Fancies, and in love with them, right or wrong you form all your Conceptions of things according to those fancied and pre-conceived Imaginations. The short of the business is, this *Machina* is eternal, and so are all the Motions of it; and in as much as a Circular Motion hath no beginning or end, this Motion that you see both in the Wheels and Index, and the successive indications of the Celestial Motions, is eternal, and without beginning. And this is a ready and expedite way of solving the *Phænomenon*, without so much ado as you have made about it.

And while all the Masters were thus controversing the Solution of the *Phænomenon* in the hearing of the Artist that made it, and when they had all spent their philosophizing upon it, the Artist that made this Engin, and all this while listened to their admirable Fancies, tells them, Gentlemen, you have discovered very much excellency of Invention touching this piece of Work that is before you, but you are all miserably mistaken, for it was I that made this Watch, and brought it hither; and I will shew you how I made it; first, I wrought the Spring, and the Fusee, and the Wheels, and the Ballance, and the Case, and Table; I fitted them one to another, and placed these several Axes that are to direct the Motions of the Index to discover the Hour of the Day, of the Figure that discovers the *Phasis* of the Moon, and the other various Motions that you see; and then I put it together, and wound up the Spring, which hath given all these Motions that you see in this curious piece of Work: and that you may be sure I tell you true, I will tell you the whole order and progress of my making, disposing, and ordering of this piece of Work, the several materials of it, the manner of the forming of every individual part of it; and how long I was about it: This plain and evident discovery renders all these excogitated *Hypotheses*

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of these Philosophical Enthusiasts vain and ridiculous, without any great help of Rhetorical Flourishes or Logical Confutations.

And much of the same nature is that disparity of the *Hypotheses* of the Learned Philosophers in relation to the Origination of the World and Man, after a great deal of dust raised, and fanciful Explications and unintelligible *Hypotheses*. The plain, but Divine Narrative by the hand of *Moses*, full of sence, and congruity, and clearness, and reasonableness in it self, doth at the same moment give us a true and clear discovery of this great Mystery, and renders all the Essays of the generality of the Heathen Philosophers to be vain, inevident, and indeed inexplicable Theories, the creatures of Phantasie and Imagination, and nothing else.

1. This therefore is the first Advantage of the *Mosaical Hypothesis* of the Origination of things above the Philosophical Theories touching the same; the latter are inevident, conjectural, and indeed apparently false; the former contains an Evidence of it self, by its consonancy, to the only manner that can be sufficient for such a Discovery, and the plain, evident, and congruous relation of it.

2. All the Philosophical Theories (except that which carries the Origination of things up to Almighty God) are full of infinite intanglements, difficulties, and inconsistencies, that ever and anon break out and discover themselves; whereby they are enforced by a continual substitution of new Suppositions, to piece up and mend the breaches that arise upon such inconsistencies, and so avoid those intollerable absurdities that their Suppositions do necessarily occasion. And again, sometime are fain utterly to lay aside some of their former Positions, as utterly undisciplinable and ungovernable by any subsidiary Explication, by reason of their gross absurdities and apparent impossibilities. This appears by some of the former Debates touching the *Epicurean* and *Aristotelian* Suppositions, and many more may be given in this matter.

But the first Chapter of *Genesis*, as it is perfectly consonant to it self, so it labours under no difficulties or absurdities, but all parts thereof are easily and apparently reconcilable one with another, and with the common reason of the things delivered upon the account of that common Supposition upon which the whole is bottomed, namely, the Efficiency of the most Wise and Powerful Intelligent Being.

Since therefore it is evident that Truth is ever consistent with it self, and that which contains any irreconcilable absurdity or contradiction with it self or any other Truth, can never be true: we have all the reason imaginable to give the preference to the *Mosaical Hypothesis*, as consonant to it self, and to all other Truths that are; and on the other side, to reject the *Epicurean* and *Aristotelian* Theories in this matter, each of which contains irreconcilable difficulties in themselves, and contradictions to evident and demostrable Truths.

3. The third observable is this, That the Holy History gives us such an Efficient, and such an Efficiency of things that gives us a plain, and clear, and evident Solution of all those admirable *Phænomena* that we see both in the Universe, in the Motions, Orders, Positions, Influences, and Conveniences of the whole Universe, and of the several great Integrals thereof, and likewise of that admirable Beauty, Order, Symmetry, Use-

fulness

fulneſs of Parts, and Organs of Faculties and Powers that are to be found in Animals, and eſpecially in Man: of theſe admirable congruities of Powers, Motions, and Inſtincts not only in the Animal and Vegetable Province, but alſo in the very inanimate Bodies; by giving us the Almighty, moſt Wiſe, moſt Bountiful God to be the firſt Author of the World and of Mankind, and to be the Contriver and Inſtitutor of that Law in things created, which we uſually call the Law of their Nature, which is nothing elſe but the Will, the Rule, the Inſtitution of the moſt Wiſe, Powerful, and Intelligent Being. And let Men toyl themſelves till their Brains be fired, and ſtudy and invent from Age to Age, to give us any other Explication of moſt of the obſervable *Phænomena* in Nature, they will toyl in vain, and ſubſtitute unto us nothing but empty, watriſh, and unſatisfactory Solutions, or meer Whimſies, *Chimæra's*, and Falſities, inſtead of Truth and Reality: And this is the admirable preference of the Divine Hiſtory of the Origination of Things, that it gives us a ſolid, plain, evident, congruous Solution of all the admirable *Phænomena* in univerſal and particular Beings, wherein our Minds may reſt, and quiet themſelves; which thoſe Philoſophers neither do nor can do, that uſe any other Method of the Origination of Things. What reaſon can there be aſſigned of the poſition of the Elementary and Heavenly Bodies in that moſt convenient poſition and ſituation, the uſefulneſs, order, and regularity of their Motions, Heat, and Influence? Why the Motions of every thing are directed with the moſt ſuitableneſs to the convenience of the Univerſe, and to its own? Why a Stone or a Bar of Iron moves downward, what is within it, or without it, that excites or directs it? What reaſon can there be aſſigned of that admirable accommodation of Meteors, the Wind and Rain, nay the very Thunder and Lightning, to the uſe and benefit of the Elementary World? What reaſon can be aſſigned of the admirable Fabrick of the Body of Man, that ſingular beauty, deſtination, and ſymmetry, and convenience of Parts and Organs, that admirable conſtitution and ordination of his Faculties, eſpecially that of his Intellect? What reaſon can be aſſigned of the wonderful order and procedure of the generation of Men, yea and of common Animals: All done with that order and uniformity, with that convenience and regularity, that it exceeds the imitation, and even the the comprehenſion of the wiſeſt Man in the World? Touching theſe and infinite more of theſe admirable Appearances in Nature, the firſt of *Geneſis* gives us a plain, reaſonable, evident Explication, by letting us know that theſe were the Works of the moſt Intelligent Being, the Works of the moſt Wiſe and Glorious God: And the reaſon why they are ſo admirably, wiſely, and excellently framed and ordered, is becauſe they were made and ordered by the great Skill, Wiſdom, Power, and Deſign of the Glorious God.

But now if we come to demand of theſe wiſe Philoſophers a Solution of the admirableneſs of theſe *Phænomena*, we ſhall have ſuch Solutions as muſt make us firſt unreaſon and unman our ſelves, before we can ſubſcribe to them, or at leaſt we ſhall have ſuch a Solution as no way countervails the value of the Work, or elſe ſhall give a Solution of *Idem per idem*, or elſe by ſomewhat elſe that is utterly unintelligible.

Ask *Democritus* and *Epicurus*, and by their favour, ſome of their late fry

fry the Atomiſts will tell us, that all or the greateſt part of this is by chance, caſual poſition, and mode, and motion, and figure, and texture of Atoms: and he that believes this whiles he hears it or ſays it, is in a full capacity of believing any thing, though never ſo unreaſonable. Let any Man but ask his own Reaſon fairly, whether he can believe this that he thus ſaith, I appeal to that Man, whether he doth or can really believe himſelf when he ſays it. Ask another ſort of Philoſophers for their Solution of it, they will tell you that Nature is the Cauſe, and a ſufficient Solution of all theſe things: But what is that Nature, where is it, is it the nature or diſpoſition of the things themſelves? Then it explicates it no otherwiſe but thus, That things have this excellency and order, becauſe it is their nature to be ſo, or, they are ſo becauſe they are ſo: But if by Nature they mean ſome ſeparate Exiſtence, what then is it? Is it a Body or Spirit, is it a reaſonable, an intelligent Being, or is it a ſurd and ſtupid Exiſtence, or elſe is it a Law or a Rule ſelf-ſubſiſting? If it be a reaſonable, intelligent Exiſtence, we differ but only *de nomine*; that which I call God they will call Nature, at leaſt unleſs they ſuppoſe it an inferior intelligent Being, and then the difficulty is only made ſomewhat more; that a ſubordinate intelligent Being was able to produce ſuch Effects which appear to all Men to be Works of the greateſt Power and Wiſdom imaginable. On the other ſide, if they ſuppoſe it to be a meer ſurd unintelligent Being, how comes it to paſs that they carry in them the greateſt evidence imaginable of the moſt perfect, and conſequently of the moſt intelligent efficient Agent? Again, will they ſuppoſe it a *Norma*, Rule, or Law of a moſt excellent frame and order, (and indeed in ſo conceiving, they conceive truly that Nature is ſuch a Law or Rule) but ſtill this doth not explicate the *Phænomena* of Nature, without ſuppoſing ſomewhat more: A Law or Rule is not in it ſelf effective or active, neither can it ſubſiſt or exiſt without an Agent that either gave it, or works by or according to it. The Laws of a State are the Rules of its Government, but this Law muſt be given by ſome Power, and ſome Power there muſt be that muſt act according to it, otherwiſe a Law is a ſtupid, dead, unactive, and unconceivable thing: And therefore a Law or Rule ſingly explicates not any the *Phænomena* of Nature without a Being that gives this Law to things, or acts, or makes things act according to it; and then we are in a great meaſure where *Moſes* brings us, only with this difference, the Law by which this great World was made, was no other but the Determination and *Beneplacitum* of the Divine Will, determined or qualified (if we may uſe that improper word) with the higheſt and moſt ſovereign Wiſdom and Power: And the Law by which things thus made were for the future to be governed, was that inſtituted Rule and Order which this Sovereign Lord contrived and placed in created Beings; and thus indeed, *Opus naturæ eſt opus intelligentiæ.* Nature therefore may have theſe various acceptations, *viz.*

1. As it ſignifies that *Principium activum* that gave every thing its Being; and thus it imports no other than Almighty God, that Supreme Intelligent Being, though improperly called Nature; *viz. Natura naturans.*

2. As it imports the Things or Effects principated or effected by this intelli-

intelligent active Principle, or the Effects or Creatures of God; or *Natura naturata*, and this hath a double import, *viz.* 1. For the first and immediate Productions of that Principle, namely, not only created Matter, which was the *Productum primo primum*, but also the things first produced in their several kinds or natures, or *Producta secundo prima*, as the first Vegetable, Animal, and Humane Individuals: or 2. For those Mixtions and Productions which afterwards had their productions in the World by successive mixtions and generations, which include all Productions, which though in relation to their dependence and first production of their kind, are still the Creatures of God; yet in relation to their immediate Causes, are productions of second Causes.

3. As it imports the Law and Rule and Method and Order, of the production and government and process of created Beings; and this of two kinds, 1. The Law and Rule of the first Creation or Production of Beings; as the production of the first Individuals of Animals, Vegetables, and Men: and herein though Almighty God proceeds with admirable Wisdom and Order, yet he used no other Law or Rule than the immediate Determination of his own most wise and perfect Will, suitable to the Business he had in hand, wherein there was necessary and fit another kind of Regiment and Order than was afterwards instituted. 2. The Laws or Rules instituted and appointed by the same most wise God to things already constituted; this is the common and ordinary and regular Law of instituted Nature: and these two Laws or Rules were different, and necessary that they should be so. In the first Constitutions of Beings God Almighty proceeded by a Law suitable to that Work, namely, according to the wise Counsel of his own Will, that was best and fittest for that Work; he proceeded more suddenly, and by the immediate interposition of his own Power the Vegetables constituted in a moment, or very speedily, and within the compass of a Day came to their full and perfect maturation and growth: so also did the Fowls, and Fishes, and Brutes, and Man, without any considerable *mora* between their first formation and complement or individual perfection: But the Law instituted for things already formed and setled was of another kind; Vegetables, Animals, and Men are in the Laws of their future existence to pass through those gradations and steps and methods which we see now in use, for the formation, production, increase, and perfection thereof. Again, in the first production of things, though sometimes the wise God used in some measure the order of second or instrumental or effective Causes, yet he bound not himself to that Rule; though, as we have formerly observed, the instrumentality of Heat might be used in separating the *Expansum*, and the arefaction of the Earth, and the production of Vegetables; and though the instrumentality of the perfected Celestial Bodies might be some way instrumental towards the maturation of Nature, towards the production of Animals: and though he used the Matter which he had created to be the *subſtratum* of the Corporeal Natures, even of Man himself; yet the great Energy and Power whereby he compleated all things, was above and beyond the activity of second Causes; yea when he used the instrumentality of second Causes, his own Powerful and Omnipotent Hand was engaged in the advancing of the efficacy of the second Causes, which he used beyond their natural

ſtrength and efficacy, there was much that was ſupernatural and miraculous, as well in the firſt ſeparation, diſtribution, and formation of things, as in the firſt Creation of the Corporeal Matter out of nothing. But in the ſucceeding proceſs and procedure of created Nature he fixed and eſtabliſhed certain powers and activities in things, and a certain order and connexion between them and their effects, and governed and regulated the motions and productions of things according to thoſe implanted powers and connexions; and this we call the inſtituted Law of Nature, namely, the activities and powers placed in created Beings, and the mutual connexions and concatenations of things to ſuch activities and powers: which Law was at firſt inſtituted by the God of Nature to be the common and ſtanding ordinary Rule for things, ſetled and fixed in their created ſtation. And therefore we are far from denying a Law of Nature or Calling in the immediate efficiency of the great God, or a miraculous interpoſition in all the ordinary procedures of things already fully ſetled and ſtatuminated by the firſt Divine Efficiency. That which we only ſay in relation to Nature already ſetled is but this, that 1. The primitive and fundamental powers and activities of things were placed in them by the immediate Will and Efficiency of God; it is this that gives the power to Heat and Fire to diſſolve, diſſipate, rarifie, and conſume; to Cold to condenſe; to heavy Bodies to deſcend; to all the Celeſtial Bodies their Motions, Influences, and Poſitions; that gave the Generative Faculty to Men, to Brutes, to Fiſhes; the Productive Faculty to the Earth and Waters; the Receptivity to *Semen* and Intellection, *&c.* 2. That he by a continuing Influx doth ſupport and preſerve all things in their being, order, and activity. 3. That this which we call the Law of inſtituted and ſtatuminated Nature, is his Law and his Inſtitution, and the connexion of natural Effects to their natural Cauſes is his Inſtitution, his Law, his Order.

And therefore we do neither deny a Law of Nature, or a connexion between natural Cauſes and Effects, but that which we juſtly blame in theſe Men that pretend themſelves to be the great Prieſts of Nature, and admirers and adorers of it, is, 1. That they do not ſufficiently conſider and obſerve, that this which they and we call Nature, and the Law of Nature, and the Power of Nature, is no other but the wiſe inſtituted Law of the moſt wiſe, powerful, and intelligent Being, as really and truly as an Edict of *Trajan* or *Juſtinian* was a Law of *Trajan* or *Juſtinian*; *Sic parvis magna:* and 2. That they do not warily diſtinguiſh between that firſt Law, *in rebus conſtituendis*; and this ſecond Law of Nature, *in rebus conſtitutis:* but inconſiderately miſapply that Law and Rule and Method which is ordinary and regular, conſtituted, and fitted, and accommodate to Nature already ſetled; as if the ſame were and ought to be neceſſarily the Rule and Law in the firſt formation and ſetling of things: which is an Errour that proceeds from the over-much fixing of our Minds to that which in the preſent courſe of things is obvious to Senſe, and not adverting, that the firſt Conſtitution and Order of things is not in Reaſon or Nature manageable by ſuch a Law, which is moſt excellently adequated and proportioned to things fully ſetled.

Therefore, beſides that Law which the Divine Wiſdom, Power, and Goodneſs hath fixed in Nature fully ſtatuminated, we muſt alſo ſuppoſe a

Law

Law and Order of the Divine Wisdom, not rigorously bound either to second Causes or present stated Methods in the first production of things. And this the due Consideration of the different nature of the state of things *in fieri* and *in facto esse*, will easily perswade, that the most wise God that hath established a fixed, regular, ordinary Law in things already setled, which he rarely departs from; yet used another kind of order, namely, the regiment of his own Will and Wisdom, and if I may with humility speak it, a dictatorian power, more accommodate to the first production of things. And thus much for the comparison between the *Mosaical* and Philosophical Theories touching things, and the great advantage and preference of the former, as most suitable to the true nature, state, and reason of things. And now I draw towards a conclusion of this long Discourse, and shall therefore in the last place give an account of those Consectaries, Consequences, and Corollaries which are evidently deducible from this Consideration of the Origination of Mankind by the immediate Efficiency of this Supreme Intelligent Being, Almighty God: and indeed, principally for the sake of these Consequences and Corollaries hath all been written that precedes in this Book, and it is the Scope, End, and Use of the whole Book, which I shall absolve in the next Chapter.

CAP. VII.

A Collection of certain evident and profitable Consequences from this Consideration, That the first Individuals of Humane Nature had their Original from a Great, Powerful, Wise, Intelligent Being.

I Now come to that upon which I had my Eye from the first Line that was written touching this Subject, namely, the Consequences and Illations that arise from this great Truth contained in these Conclusions.

1. That Mankind had an Original of his Being *ex non genitis.*

2. That this Origination of Mankind was neither casual, nor meerly natural.

3. That the Efficient of Man's Origination, was and is an Intelligent Efficient of an incomparable Wisdom and Power.

First therefore, we have here a most evident, sensible, and clear conviction of a Deity, and a confirmation of Natural Religion, which consists principally in the acknowledging of Almighty God to be a most perfect Eternal Being, of infinite Wisdom, Goodness, and Power, and a due habitude of Mind, Life, and Practice, arising from that Principle.

It hath been commonly observed, that the particular or instituted Religions since the Creation have had their Proofs by Miracles, which were as it were the Credentials to subdue the Minds of Men to assent to it. Thus the instituted Religion of the *Jews*, given by the hand of *Moses*, was confirmed by the great Miracles done by God by the hand

of *Moſes*, in *Egypt* and in the Wilderneſs: and the Chriſtian Religion had its Confirmation by the Miracles of Chriſt and his Apoſtles, who did wonderful things, beyond the reach and power of created Agents or Activities, which were therefore Miracles; ſuch as were governing of the Winds and Seas, healing of the Sick by a touch or word, raiſing the Dead, *&c.*

But it is farther ſaid, That Almighty God never uſed Miracles to evidence the truth of his own Exiſtence, Power, Wiſdom, Goodneſs; or for the eſtabliſhing of Natural Religion, or the confuting of Atheiſm.

But I take it, that there are really as many Miracles for the evincing of the truth of Natural Religion, *viz.* the Exiſting of Almighty God, as there are Works in Nature: For although it be a great truth, that the Laws of Nature, as the Poſitions of the Heavenly and Elementary Bodies, their Motion, Light, Influence, Regularity, Poſition, propagation of Vegetables, Animals, Men, and the whole Oeconomy of the Univerſe is by the Divine Wiſdom, Power, and Goodneſs ſetled in a regular courſe; ſo that now we call things Natural, and Works and Laws and Order of Nature; and being ſo ſetled and fixed, ceaſe to be Miracles: yet in their firſt Inſtitution and Conſtitution, they were all, or many, Miracles, Works exceeding the activity of any created or natural power, and accordingly ought to be valued, and really are ſo; and it is nothing elſe but their commonneſs, and our inadvertence and groſs negligence, that hinders the actual eſtimate of them as great and wonderful Miracles: As I have often ſaid, if at this moment all the Motions of the Heavenly Bodies ſhould ceaſe, or there ſhould be a general ſtop of the Propagation of Animals, Vegetables, or Men, if Mens Reaſon ſhould generally fail them, and for the moſt part they ſhould become like Brutes, if the Light of the Sun were darkned, or the great Luminous or Planetary Bodies ſhould bulge and fall foul one upon the other, or that diſorder or confuſion ſhould generally fall upon the Works of Nature, and break that excellent Order that now obtains among them, we ſhould be full of admiration of ſuch a Change, and account them Miraculous: And the reaſon is, becauſe the ſenſe of the Change is at preſent incumbent upon us, and we cannot chooſe but take notice of them as ſtrong, unuſual, miraculous Prodigies: When all this while Natures courſe holds regularly, the Wonder and Miracle is ten times greater in the ſtate of things as they now ſtand, than it would be in ſuch a diſcompoſure of Nature. The Motion, and Light, and Poſition, and Order of the Heavenly and Elementary Bodies is a greater Evidence of the Divine Power that put them and keeps them in Motion, than if they all reſted. And it is a greater Miracle that a Man was conſtituted upon the Earth, that he hath a power given him to propagate his kind, that he lives ordinarily ſuch a portion of time in the World, that he hath the uſe of Reaſon and Underſtanding; I ſay there is more of Miracle in it, than in the want of it: Only there are theſe three things that abate the value of it among Men, 1. The commonneſs of the benefit and wonder renders the Obſervation thereof little. 2. Mankind is negligent in improving his Obſervation, he never rubs the Corn out of the Ear, and ſo by inadvertence, ſupineneſs, and negligence, ſuffers things of this nature to ſlip away without notice. 3. We rarely carry things to their Original, but

take

take them as we find them; whereas if we did as by a Clew follow the Works of Nature to their Original, we should find the Divine Omnipotence and infinite Wisdom at the upper end of the Chain, and the Worms themselves no other than Miracles in their first constitution. He that considers the admirableness of the Frame of Humane Nature, especially of his intellectual power, and that is but acquainted with himself, will without arrogance or vain-glory conclude that Man is the most admirable Creature that this lower World affords, a Creature to which all the visible Creatures of this lower World seem in a great measure to point at, as their End. And therefore if the first Individuals, the common Parents of Mankind were at some one time constituted, there was a very great deal of Power, Wisdom, and Intelligence employed to the making up of such a Piece as this: If we see an excellent Picture to the Life, or a Statue, there will not need much Rhetorick or Logick to perswade or evince, that surely it was not done without an excellent, knowing, and intelligent Artist. And certainly that Efficient, who ever he was that did at first compose and make up the admirable Structure of the Humane Body, all the Organs, Nerves, Veins, Arteries, *Viscera*, Bones and other Integrals thereof; that endowed it with the Faculties of a vegetable and sensible Nature, that gave him a reasonable, intellectual self-moving Soul, with all its subordinate Faculties; that so strangely and stupendiously united two such different Essentials of a reciprocal and intellectual nature, was some intelligent Being, and such an intelligent Being that was not only of a far more admirable Wisdom and Power than Man, now the best of the visible Creatures, appears to be; but of such an excess of Wisdom and Power, as cannot be found in any known Being, besides him that we call Almighty God.

And if any Man shall say, as needs he must, that surely it must be granted, that he was of a Power and Wisdom far more excellent and perfect than that Work he thus made; but how are we sure that he must be God? May it not be some Being that admirably surpasseth the perfection of Humane Nature, and yet may it not be something less than infinite, somewhat inferior to God, may it not be some Angel, some separated Intelligence? To this I say, 1. That Man that can be forced by this Work to acknowledge an Intelligent Being transcendently beyond the Power and Wisdom of a Man, a Power that he never saw, but only collected from the eminence of an Effect which surpasseth the activity of any Being that he hath ever seen with his Eyes; a Being that acts by choice, election, and intention: I say, that Man that can once admit an invisible Being of an efficiency equal to such a Work, hath broken the strength of Atheism; since whatsoever can be alledged to evince such an Existence, as the Objection supposed doth, may be alledged efficaciously to prove the Existence of a God; since all that can be said for the Existence of the former, that and much more may and must be said and granted for the Existence of the latter, namely, God. 2. But again, since the measure of any Man's conception touching the infinite, sovereign excellence of an Efficient must needs be the excellence of the Work; if therefore a Man doth not, cannot know any more admirable created Existence than himself, he cannot expect a greater Evidence of a more transcendent Power, Wisdom, or Goodness, than he that was the

Efficient

Efficient of such a Being as himself is: 'Tis possible he may suppose some more excellent Inhabitants of the Heavenly Bodies than he himself is, but this is more than he knows; and 'tis true the Sun and Stars are goodly beautiful Bodies, but he doth not know that they are any more than fiery Balls, that naturally give light and heat: but as he hath no evidence, so he hath no evident reason to satisfie, that they are animate, much less intellectual; and consequently, for any thing a Man knows he himself is incomparably a more excellent Being than they: it is true, they last longer, and so doth a piece of Marble, I speak not to disparage those beautiful Beings, but to enforce the Argument *ad hominem*; that to the first formation of a living Intelligent Nature there is as great a Power requisite and conspicuous, as to the formation of the noblest Creature that we see or know: And I should not question, but that that Power and Wisdom which were equal to the first formation of the Reasonable Nature, were equal to the formation and efficiency of the Sun or the brightest Star in Heaven. Since therefore I can judge of the measure or excess of the Power and Wisdom of any Efficient by the nobleness and value of the Effect, and I know not any sensible Being of greater worth, value, and wonder than Man; I have reason to believe that he that first formed Man is a Being of the greatest and most transcendent Power, Wisdom, and Goodness that is imaginable; and that Being which I have reason to believe to be of the greatest Power, Wisdom and Goodness, I have reason to believe to be Almighty God, who is *Optimus Maximus*. And if it be said that the conviction by this Argument is so much the more infirm, because I see daily that Man begets a Man, and so the efficiency no more proves the Existence of God, than it proves the Father to be God that begets a Son of his own likeness and *species*; I say the Instance is so far from weakning the Inference, that it rather enforceth it: For the first formed Parents of Mankind were also endued with this generative power, by virtue of that first efficiency upon the first individual pair of Mankind; so that the generative power in Man is but an effect of that redundance of Power that was in the first Efficient of the Humane Nature: Indeed if any Man, or all the Men in the World could constitute a Man in any other way than by natural propagation, it were an Instance that would sufficiently confute the Inference. But the generative power and faculty being but a part of that admirable effect that was wrought in the formation of the Humane Nature, it rather advanceth, than any way depreciateth the Power and Wisdom of the first Efficient of Mankind, that he was formed together with such a power of propagating his kind.

2. From hence we learn not only that there is a God, but in some measure we learn what he is. As this Work, the primitive Effection of the Humane Nature, could never be effected but by an Intelligent Being, so when we see such a Work as this, we cannot choose but acknowledge that he is transcendently wise, transcendently powerful, transcendently good; that such was his Power and Wisdom, appears by his Work, and that such was his Goodness, appears, in that freely without any motive or advantage to himself he formed this excellent creature Man; it was but to communicate his abundant Goodness, and to give Being to an Intelligent Nature that might be capable of the participation of his

Good-

Goodness and Bounty commensurate to his nature. We also learn, that as he made an Intelligent Being, so he is a Transcendent Intelligence; *He that made the Eye, shall he not see?* It is very true, the perception of Sense is the lowest kind of perception, and the perception of rational and discursive Intellection is of a higher rank than the perception of Sense; the Intuitive perception is nobler than that of Ratiocination; but the perception, if I may use that word, in Almighty God is of a transcendent perfection above all these, and includeth them all, but not under those allayes that render other kind of perceptions less perfect: He sees and hears and knows, without an Eye, without an Ear, without an Object. He that could create an Intellectual Being, doth most perfectly understand and know, for he could not be destitute of any perfection whereof an incorporeal Being could be capable; and since he made a Being capable of Intelligence, certainly he had a greater and more perfect Intelligence. And here I cannot choose but re-mind some things again that I have formerly intimated, *viz.* 1. That those that go about to attribute the Origination of Mankind to a bare Order or Law of Nature, as the primitive Effector thereof, speak that which is perfectly irrational and unintelligible: for although a Law or Rule is the Method and Order by which an Intelligent Being may act, yet a Law or Rule or Order is a dead, unactive, uneffective thing of it self, without an Agent that useth it, and exerciseth it as his Rule and Method of Action. What would a Law signifie in a Kingdom or State, unless there were some Person or Society of Men that did exercise, and execute, and judge, and determin, and act by it, or according to it? And therefore *Aristotle*, in the Books *de Mundo* attributed to him, though in the description of God; as to the constancy of his working, he stile him Νόμος· *Lex æquabiliter in nos fusa, nec transpositionem nec correctionem ullam recipiens, præstantior & firmior omnibus quæ in tabulis descriptæ contineantur.* Yet he rests not in that description, but tells us that he is a Being that acts by Empire and Command and Will: *Quod in navi gubernator, in curru auriga, in choro præcentor, in civitate lex, in exercitu imperator, hoc idem in mundo Deus.* So that to the effecting of the Humane Nature a bare independent Law is incompetent, but there must be an Intelligent Being, whose Will that Rule and Law which we call Nature is. 2. That although the Manner and Method that the Divine Power and Wisdom used in the first formation and effecting of the Humane Nature, is not cognoscible by the Light of Nature, without Divine Revelation, because none but Almighty God was acquainted with or present at that Work, and his Power and Wisdom might use various Orders or Methods in its first effection: yet the Conclusion, that this Work, whatever particular Method it had for its effection, was the Work of a most powerful, intelligent, wise Being, acting by Intellection, Will, and Intention, is a Truth apparently evident to the Light of Nature and Reason, and as infallible a Demonstration of a Deity, as if a Man could have been present and seen the Work done; as I do most rationally conclude an excellent Watch or other *Automaton* was the work of an intelligent Artist, though I do not know the particular manner how he made it, unless I am particularly informed thereof by him.

3. From hence we learn, that the Divine Providence extends to this lower

lower World and all the things therein, and is not only confined to things above the Moon, as *Ariſtotle* would have it.

He that condeſcended to the effection not only of Man, but of all the Animals of this lower World, certainly had a regard to them, and would not leave them without the regiment of his Providence, which were the Works of his own immediate Power and Will.

It is true, the ordinary regiment of the Divine Providence in things natural is ordinarily managed by this regular and ordinary Law of Nature whereof we have ſpoken before. But yet he deals not by the World, as I deal by my Watch; when I have wound it up I take no more care of it, but it moves according to the regular compoſure of it; but he communicates a general Influence to it, whereby it is ſupported in its Being and Order; and as he manifeſted a more ſpecial care in the faſhioning of Man, ſo he affords him a ſpecial Providence in his regiment.

4. From hence we learn, not only the Original of thoſe admirable Faculties in Man, eſpecially of the light of his Underſtanding and the liberty of his Will, whereby he reſembles his Maker; but alſo from whence he had that Intellectual Soul, not out of the Matter whereof his Corporeal and Animal Nature was conſtituted, but of a higher and nobler extraction, namely, by Creation he breathed into him the breath of Life.

5. From hence we learn to be confirmed not only in the Notion of the Immortality of the Soul, but in ſome meaſure the reaſon of it: It was a created Spiritual Nature, infuſed into him by the Almighty efficiency and infuſion of God.

6. From hence we learn, that Mankind is of kin to both Worlds, the Celeſtial and Elementary, *nexus utriuſque mundi*, capable of a felicity beyond the extent of this inferior World.

7. From hence we alſo learn from whence theſe common Notions, eſpecially of the Exiſtence of a God, and theſe anticipations of ſome Moral Principles of the Veneration of God, Righteouſneſs, and Juſtice are evidently to be found in the generality of Mankind; (but where they are impaired by corrupt Cuſtoms or Education) from whence thoſe Operations of the natural Conſcience are diſcernible in moſt Men antecedent to any Inſtruction or Education, the original of thoſe common Notions that more immediately concern the Intellective Faculty, and Moral Inclinations that more immediately concern the Volitive Faculty, ſeem to be two; the firſt more primitive and radical in the Soul, the ſecond not altogether ſo radical and primitive, yet ſuch as have alſo a natural connexion with and to the Soul. Firſt therefore as to the firſt of theſe: The Soul of Man, as it came out of the hands of the Glorious God, ſo it had engraven in it theſe Impreſſions and Characters of ſome great and intellective Principles and rational Propenſions, that ſerve ſecretly to direct and incline him to theſe common Notions and Sentiments. So that whether the Souls of the Deſcendents from *Adam* were traduced from him, or whether they are immediately created and infuſed by God, (a Diſpute not ſeaſonable in this place) yet thoſe real Characters, Impreſſions, and rational *Noemata* and Inſtincts (though weakned by the Fall, and the contracted Corruption of Humane Nature)

Nature) are brought with us into the World, and grow up with us; whereby Mankind hath not only those great excellencies of his Faculties, Understanding and Will, but a certain congenit stock of Rational Tendencies and Sentiments engraven and lodged in his Soul, which if duly attended and improved, are admirable helps to the perfecting and advancing of a Rational Life. And therefore, as the Divine Goodness did not only give the Faculties of Sense and Perception to the Sensitive and Animal Nature, but also lodged in their sensitive Souls certain connatural and congenit sensitive Instincts (not acquired by Experience, but congenit with them) whereby they are directed and inclined to what is conducible to the sensitive good of their Sensitive Nature; so the Rational Nature is furnished with certain congenit Notions, Inclinations, and Tendencies born with him, but improved and perfected by the exercise of Reason and Observation, whereby he is inclined and directed antecedently to the good of a Reasonable Life or Nature.

These differences seem to be in those congenit Inclinations and Instincts of Animals and Men, 1. In the nature of them, those anticipations that are in Animals are meerly sensible; those in Men intellectual, moral, and suitable to the Operations of a reasonable Being. 2. In their end, those of Animals are only in order to a sensible good, and the regiment of a sensual Life; those in Men are directed to the use and benefit of a rational Life, and not only so, but in order to the acquest of a supernatural and eternal Life. 3. In as much as the Sensible Nature is not endued with Intellection and Will, and therefore not properly capable of a Law in the true and formal nature of a Law; therefore those Instincts that are lodged in their nature, are meerly Inclinations, or natural Propensions, or Biasses: But the Humane Nature being endued with Intellection, Reason, and Liberty, and therefore capable of a Law in its true propriety and formal nature; those rational Propensions and Inclinations in the Humane Nature, are lodged in him by the great Governour and Law-giver of Heaven and Earth, *per modum legis obligantis*; and the insition and engraving of those Notions, Propensions, and rational Tendencies are in nature of a promulgation of that Law, the inscription thereof in their Hearts, and means, helps, and assistances to their observance thereof. And herein lies the true Root of the Obligation of the natural Law and natural Consciences, so excellently decyphered by the Apostle in the two first Chapters of the Epistle to the *Romans*; and this I call the primitive and radical Insition of the Law of Nature in the Soul. 2. But besides this primitive Insition, there is a secondary yet natural Insition of the Law of Nature in the humane Soul, which expands and improves it self as the exercise of Reason increaseth; which is a certain congruity between the Faculties of the Soul, the Intellect and Will, and those Truths of indisputable importance in the Understanding, especially that of the Existence and Regiment of Almighty God, and those moral Sentiments of Good and Evil that in their discovery concern immediately the Understanding or *Syntereſis*, but in their exercise concern more immediately the Will: That as we see by a certain connatural congruity between the visive Faculty and the visible Object, and as we tast by a connatural congruity between the Faculty and the Object of Tast; so there is a connatural congruity between the intellective and volitive

Faculties in the Soul, and those *communia noemata* of these great important Truths both intellective and moral, whereby the Soul perceives, and relisheth, and tasteth true and good, and inclines to it.

8. From the Consideration of this Effection of Man by the Power and Goodness and Wisdom of the glorious God, we have the discovery of that infinite obligation of Duty, Love, and Gratitude of all Mankind unto Almighty God. To give a benefit to a Being already existing, carries in it an Obligation of the person benefited to his Benefactor, *juxta modum & mensuram beneficii.* But God Almighty is the Benefactor of Mankind in the greatest imaginable amplitude and comprehension: he gave him Being, the vastest and most unlimited Gift, and he gave him such a Being, so advanced, so excellent, and perfect, and accommodate with all the conveniences that his nature was possibly capable of; and although Man wilfully threw away a great measure of his Happiness, yet he hath still so much left as binds him to an eternal Gratitude and Duty to God, both as his Maker and as his Benefactor: and the Posterity of *Adam* hath still continued upon them the same reason of Duty and Gratitude: I shall not here, as I said, enter into the Consideration of the propagation of the Humane Nature. If the Soul of every person propagated be created and infused by God, then every person seems related unto Almighty God in a way little different from that of the first formed Man: But if the Soul be also propagated as Light or Fire from Fire or Light, by a kind of Irradiation from the Soul of the first Man, yet still we are all his Off-spring, every Man owes more of his Being to Almighty God than to his natural Parents, whose very Propagative Faculty was at first given to the Humane Nature by the only virtue, efficacy, and energy of the Divine Commission and Institution, and the Parents of our Nature are but *vicaria instrumenta Numinis*, in the propagation and formation of our Nature.

9. From hence we learn the true Foundation, and Root, and Extent of that Subjection that the Created Nature owes to Almighty God, namely, on the part of Man there is dependence upon God, as the root and support of his existence, there is the obligation of love, gratitude, and duty, as to his greatest and most sovereign Benefactor: But this is not all the foundation of Subjection on the part of Man, and Authority on the part of God, but there are certain radical foundations of the Divine Authority and Sovereignty over Man; namely, 1. A right of Propriety, nothing can be more a Man's own than that which he gives a Being to: But the propriety that any Man can have in what he makes, is still limited and qualified; first, because he is not himself his own, he owes his Being to God, and therefore without the help of Divine Indulgence his acquests are like the acquests of a Servant, *acquirit domino.* And besides, the Matter is not his own, whatsoever he makes, he makes out of that Matter that was not his own: But the propriety that Almighty God acquires in his Creatures is absolute, because he himself is a Supreme and Sovereign Efficient, none is above him; and because the Matter out of which he effected Man and all Corporeal Existences was perfectly his own, it was Matter of his own making. 2. A right of absolute Dominion and Sovereignty over his Creature; where the property is circumscribed, limited, or qualified, the dominion is so too; but an

absolute

absolute sovereign property carries with it an absolute sovereign dominion in the Proprietor. 3. An infinite irresistible power to exert the right of his Dominion according to his Will: The two former Considerations give him a sovereign authority over his Creature, a right, *jus disponendi*; but authority or right being divided from power to execute that authority and exact obedience to it is lame, but the glorious God hath not only an absolute right of propriety and dominion over his Creature; but an infinite irresistible power to rule, order, and dispose it according to his Will: Almighty God tells us, *Jerem.* 18. that as the Clay is in the Potter's hand, so are Mankind in his hand, yea and in a far greater subordination and subjection to his Power; the power of the Potter over his Clay is a finite limited power, we see in the same place it resisted and disappointed his intention by its untractableness: But the power of God over his Creature is an infinite power, he that by his power made him in an instant, can in an instant dissolve or annihilate him: And yet this infinite Power of God is under the management of a most wise, and holy, and pure, and gracious Will; and therefore though his Propriety be absolute, his Dominion boundless, his Power infinite, yet the exercise of his Dominion and Power is full of Goodness, suitable to the most perfect nature of God: *I am God, and not man, therefore ye sons of Jacob are not consumed.* Here therefore we have that great Question among some of the Ancients satisfactorily answered, namely, What is the Root of all Obligation in Mankind, whence comes the Obligation in the Consciences of Men, what is it that binds Men to keep their Faith, their Promises? It is the Law and Command of him that hath sovereign Authority to command, and infinite Power to exact Obedience, and to punish the want of it; all other foundations of Obligation are but weak and deficient without this, or in comparison to it.

10. In this History of the primitive state of Man, and his defection, we have the Solution of that great *Quæsitum* that troubled the ancient Philosophers, especially the *Stoicks*, namely, Whence or how came it to pass, that not only that great disorder happens in things of this World, especially in the nature and practices and customs of Mankind, some would have it from Matter, some from one thing, some from another; we see here a plain Solution of the *Quære*, That it came not from God, no nor from Matter, but by the defection and disobedience of the first Man, which brought Death into the World, and Sin and Corruption and Depravation and Disorder into the Humane Nature, and brought disorder and discomposure upon the greatest part of this lower World; which as it was principally made for the service of Man, so it suffered a great Concussion and Breach by the Disobedience and Apostacy of Man: and from this unhappy root ariseth all the Disorders and Confusions in the humane World; for although the Fall of Man did neither alter the essential Constituents of Mankind, nor wholly raze out the Engravings of those common Notions, Sentiments, and rational Instincts that were in them; yet it did in a great measure impair and weaken them, and brought in a very great deordination and discomposure, setting up the lower Faculties in rebellion against the superior; so that the wiser and more morate part of Mankind were forced to set up

Laws and Punishments, to keep the generality of Mankind in some tolerable order.

11. This reasonableness, congruity, and consonancy to common Light and Reason in the *Hypothesis* of the Formation of the World and Mankind, and the great preferenee that it hath above those Inventions of the ancient Philosophers touching the same; the admirable Solution of many of those difficulties which are hereby solved, doth give a very great valuation and esteem to the truth and Divine Authority of the Scriptures. It is true, their Authority is above the contribution of Humane Reason, or any Supplies it can bring either to its Truth or Authority: but yet when a Man shall see so great a clearness and plainness and reasonableness in the Holy Scripture touching this great Truth, so many difficulties and absurdities thereby avoided, so great a suffrage and attestation of Reason and common evidence bearing witness to this Truth, and to such a Truth as could never be at first particularly discovered without Divine Revelation, yet being discovered, carries in it nothing of absurdity, but a singular congruity both to it self in the several parts of it, and to the common Reason.

It is true, a great though a Ministerial and Humane Suffrage to the truth and excellency of the Holy Scriptures, strengthens our Faith, which God knows stands in need of all the contributions that may be, to bear up our Souls against that root of Infidelity that is in us; and may be instrumental and preparative to bring those to the belief and veneration of the Scriptures who are without, and hardly perswadible, but by those *media* that bear a congruity to their natural Light and Reason.

12. And therefore we have infinite reason to bless and magnifie the gracious God, that hath lent us his Holy Scriptures to inform us in things to be believed and to be done, and to contain and preserve us *infra cancellos certitudinis*. The Lord knows, and we cannot choose but daily observe in our selves a strange mobility and instability in our Imaginative and Intellective Faculty, roving after every thing and in many things that we know, and much more in things we know not, framing strange *Chimæra*'s, finding out many Inventions, was the first effect of the departure of Mankind from a revealed Truth, and searching after unknown and forbidden Knowledge.

And this hath been the course and walk and disease of our restless, moveable, unstable, Mercurial Brains ever since in matters of Philosophy, in matters of Religion: The merciful and wise God therefore, to keep in and regulate the extravagant and witless Spirit of Man, and to give us the clear knowledge of things necessary and useful, and to prescribe and fix bounds, and banks, and limits to our moveable, unstable, and unfixed Minds, hath given us these Sacred Oracles both to enlighten and inform us, and to fix and contain us within the bounds and limits of Truth and Sobriety.

13. I have before touched something concerning a common Tradition that might obtain in the generality of Mankind, concerning the Origination of the World and Man; and here we may find a reasonable discovery of something touching the root of this Tradition, namely, the Holy Scriptures, especially that of *Genesis*; for we find very much, among the ancient Heathen especially, touching the Creation of the World, the

Obser-

Observation of the Seventh Day, the Flood, *Noah* and his three Sons, though by other Names; and divers other things, wherein though they mingle some of their own wild Notes, yet they bear a great analogy to the Relations in the Scriptures, and seem borrowed from them, or from the *Hebrews*, to whom that great Treasure of the Scriptures was committed. And if a Man consider how many Opportunities there were for the communication of the *Jewish* Learning to the rest of Mankind, even in the ancient times, especially to the *Egyptians*, with whom they long dwelt, and with whom *Solomon* was joyned in affinity; so the *Babylonians* and *Chaldeans* during their Captivity there to the *Grecians*, by the intercourse they had with them after the breaking of the *Persian* Monarchy: it will render it an easie Supposition, that much of the *Jewish* Learning was derived to many of the learned Heathen, though they oftentimes mingled with it some Conceptions of their own: *Plato* and divers other *Grecians* borrowed much of their traditional knowledge from the *Egyptians* and they from the *Hebrews*. *Vide Selden. de Jure Gentium, &c. lib.* 1. *cap.* 2.

14. Since Man in his first Original is the Work of the most wise intelligent Being, it is evident that Almighty God in this effection of Man did intend an end and scope of this Work: an intelligent Agent acts *ex intentione & volitione*, and therefore proposeth in his Work an end or purpose in it, and the designation of an end in working is the great perfection of an intelligent Agent: Agents that are simply Natural, or that are directed but by implanted Instincts, act by a kind of necessity of Nature, their activity and vigour putting it self forth not by choice or election, but driven by the activity of their nature. And although it is visible that all, even the most necessary operations of unintelligent Causes in the World, are directed unto certain excellent ends, yet the election of and direction to these ends is not in those necessary and natural Causes themselves; but is in that intelligent Efficient that intended and designed that end, and endowed the natural Agent with those active Faculties or Powers which might be proper and serviceable to such ends, and mancipated or bound to them certain Instincts and natural Motions subservient to those ends. As in things that are artificial, my Watch gives me an account of the Hour of the Day, that is the end thereof; but it is an end not designed or intended by the Watch, but of the Artist that made it.

And although in sensible Creatures there seems to be an Image of Intelligence, and they move more perfectly to their several ends of their several operations; as in choice and eating of their food to preserve their individual nature, in generation to preserve their specifical nature, yet the truth is, those designations of the ends of these operations, and the furnishing them with instincts in order thereunto, is due still to that Intelligent Being, namely, the glorious God, which hath by his Wisdom determined these sensible Creatures to these ends, and by these means, in the first institution of their natures.

15. And upon the same reason it follows, That since Almighty God is the Maker and Efficient of Man, it is not only reasonable and just, but natural, and in a manner necessary, that the designation of Man to his end should belong to him that was his Efficient. And therefore although

although the ſupreme intelligent Being, that Efficient of Mankind hath made Man an intelligent Being, endued him with Will, whereby he is in a manner *Dominus ſuarum actionum*, and a kind of Image of his Maker, yet he is not the Lord and diſpoſer of his own end; for though Man be made an intelligent and free Agent, and therefore in thoſe actions that move from himſelf he hath the priviledge of an intelligent Agent, and propounds his end to himſelf in thoſe actions: yet he was not the Efficient of himſelf, and therefore cannot proportion to himſelf the end of his Being, but that belongs only to that intelligent Efficient that gave him his Being; and therefore that Efficient can only be the Propounder of that end which is commenſurate to his Being.

16. Since Almighty God is not only an Intelligent Agent, but the higheſt, moſt wiſe, powerful, and perfect Cauſe; and ſince it ſeems to be moſt ſuitable to ſuch a wiſe Being to proportionate the ends of his Works in ſome meaſure ſuitable to the worth and value of the Work. And ſince Man is the work and effection of God, and nobleſt work of his that we ſee in this inferior World, we have juſt reaſon to conclude, That Almighty God made Man for ſome end, and for ſome ſuch end as may bear a proportion to the nature, condition, and quality of the Work it ſelf.

There ſeem to be but two ways to know the end that an intelligent Agent propounds in any action or work, 1. The firſt is plain, explicit, and clear, *viz.* When that Agent reveals and diſcovers what is the end he intends in the work he doth: and thus it hath pleaſed the glorious God to acquaint us in the Holy Scriptures, that his intent in making Man was his own Glory, and to make Man a Veſſel of everlaſting Happineſs. But becauſe in this place we are only making natural deductions from the effection of Man by God, I ſhall refer the conſideration of the former to its proper place. 2. Therefore the ſecond is by collection of natural and reaſonable Conſequences from the nature of the Efficient, and the worth, value, or condition of the Effect; and this *medium* though it be not ſo clear, particular, and explicit as the former, yet it doth give us ſome account touching the nature and kind of the end that is probably propounded by the Efficient: but touching the ſame in the next Chapter.

CAP. VIII.

A farther Enquiry touching the End of the Formation of Man, ſo far as the ſame may be collected by Natural Light and Ratiocination.

WE may eaſily obſerve in general in the Works of Nature, and in every particular thereof, three kinds of admirable Accommodations.

The firſt is, the Accommodation of every thing to the common beauty and integrity of the Univerſe: As in a curious piece of Landskip there are

are orderly interſperſed Clouds, and Trees, and Flowers, and Rivers, and Houſes, and Arches, and Ships, and Fiſh playing, and Birds of ſeveral kinds, ſome flying, ſome ſwimming, ſome perching, yea various Flies and Worms and Inſects, and all contribute to the beauty and ornament and variety of the entire piece, though each hath a particular beauty of its own: So in this great and glorious Frame of the Univerſe not only the Celeſtial Bodies, but all the Animals and Vegetables, even to the leaſt Fly, or Worm, or Flower, or Herb, contribute to the beauty, glory, ornament, and variety of the whole; and make up one common demonſtration of the admirable Wiſdom of that great God, that made it *valde bonum.*

And certainly under this Conſideration it is apparently evident, that Man contributes no ſmall portion of beauty and ornament to this goodly Frame of the Univerſe: For if we ſhould ſuppoſe that all the Integrals of the inferior World were as now they are, only deſtitute of the Creature called Man, it would ſoon appear that it wanted much of that beauty, and comelineſs, and perfection which it now hath by the acceſſion of this excellent Integral of the Univerſe; which though it hath its reſidence in the lower region thereof, yet in the common compute and eſtimate of the whole it contributes to its beauty and integrity.

The ſecond Accommodation of every thing, is to ſome other part or parts of the Univerſe; and this though it may be ſingle, or a reſpect only between ſome one ſingle part and ſome other ſingle part of Nature, yet for the moſt part we ſhall find every thing in Nature hath an accommodation unto very many other things; the Wiſdom of Almighty God being *multifaria ſapientia*, hath admirably evidenced it ſelf, in giving almoſt every thing in its nature a complexed and complicated accommodation to various other things of differing kinds and natures. This is more eminently conſpicuous in the Heavenly Bodies; for Inſtance, the Sun is accommodated to the uſe and convenience of the Planetary Bodies, and of this inferior World and of every part thereof, by his Poſition, by his Light, by his Heat, by his Motion it procures Generation for the repleniſhing of the Earth, raiſeth Clouds and Vapours to irrigate and water it, it occaſioneth Winds to move and communicate thoſe Irrigations, it gives variety of Seaſons, meaſures of Times, and infinite more accommodations to other things. If we come lower, to the Elementary World, the Air is accommodated as a fit *medium* for the derivation of Light and Influence from the Celeſtial Bodies; it is the vehicle of the Meteors, the means of Reſpiration, the food and life of the vital and animal Spirits, and many the like accommodations. If we conſider of Animals, we ſhall find admirable accommodations in them one to another, and eſpecially to Man: the Horſe, high-ſpirited, yet very docible, fitted for ſwiftneſs, carriage, and agility, by the make of his Body, his Neck, his Mouth, his Back, his Hoof; the Ox patient, painful, ſtrong, fitted for draught; the Camel fitted for ſtrength, and a natural Saddle for Burthen; the Cow for yielding Milk; the Sheep for Cloathing; the Beaſts and Birds of greateſt uſe being moſt commonly made tame, and affecting a ſpontaneous ſubjection to Man: among the Vegetables ſome are for Food, ſome for Medicines, ſome for Smell, ſome for Taſt: nay that ſeemingly moſt abject part of Nature, the Inſects, even the worſt

as well as the beſt of them, have their accommodation to other things; ſome for Food to the more perfect Animals, as Flies, Worms, *&c.* ſome for Medicines both for Men and Animals; nay the very venemous Inſects are accommodated to the ſalubrity of the Earth and Waters, collecting the unwholſom Juyce of either into their own conſiſtency; and many that are poiſonous and hurtful, yet carry with them Antidotes and Remedies, as Vipers, Scorpions, and divers others.

Although in the lower World there are various accommodations of things one to another, yet the chief and ultimate accommodation of things ſeems principally to terminate in Man. The Graſs of the Field is accommodate to the uſe of Animals for their food, and ſo are the Inſects for the food of Fiſh and Fowl, but theſe in their laſt particular accommodation are for the food or other uſe of Man. On the other ſide, Man is accommodate to the convenience and uſe of the Vegetables and Animals, but not in a way of Subſervience or Service, but in a way of Regiment, Order, Empire, and Protection, which he is enabled to exerciſe over the Creatures of greater ſtrength and bodily force, by the advantage of his Faculties wherein he exceeds them: Thus he is accommodate to the Vegetable Nature, by Planting and Husbandry; to the Animal Nature by ſubduing the unruly and hurtful, by the diſciplining and managing the docible; by protecting the domeſtick, by providing for their wants. The accommodation of Brutes to Men is an accommodation of an Inferior to a Superior; the accommodation of Man to Brutes is an accommodation of a Superior to an Inferior, an accommodation of Regiment and Protection.

The third ſort of Accommodation is of every thing unto it ſelf; either in relation to its proper *Species*, by propagation of its kind; or in relation to its individual nature, which is that which I principally mean to ſpeak of. We may obſerve at leaſt in every Animal, 1. An accommodation of Faculties ſuitable to his nature, uſe, and convenience, which are principally theſe; Cogitation, Senſation, Phantaſie or Imagination, Appetite and power to Move it ſelf, though in various degrees of perfection. 2. That all theſe Faculties are terminated in a ſenſitive Life, or Life of Senſe, and go no farther. 3. That all thoſe Faculties are exactly fitted with Organs proportionate to their Faculties, and the ſpecifical perfection of them: the Organs ſubſervient to the Faculties of the meaneſt Inſect, are as exquiſitly accommodated and fitted thereunto, as the Organs of a Horſe or an Elephant are accommodate to the ſpecifical Faculties of that Animal. 4. That the wiſe God hath proportioned Objects of the Appetites of every Animal exactly ſuitable to thoſe Appetites, and a connatural proſecution and dexterity in the aſſecution of them: ſo that no natural Deſire or Appetite is in vain, or notional only, but really fitted and accommodated with an Object proportionable to it. 5. That every Animal hath its higheſt complacency and contentment in the attainment of the ſuitable Object of its Appetite, and this is its commenſurate Happineſs; the Fox, or the Lion, or the Otter hath no greater dexterity in the getting of his Prey, nor greater contentation in his acqueſt; than the Bee hath in getting Honey, or the Spider in catching his Fly.

Theſe things being thus premiſed, we have therein generally included the

the natural Method whereby we may by the Light of Nature ſearch out the true and ſpecial End for which we have reaſon to believe the great and wiſe Efficient made Man.

It is true, that ſome things Man hath in common with the reſt of created viſible Beings, as that he is a corporeal Being, hath Life and Senſation, and is a beautiful Piece of the Furniture of this lower World. In theſe things therefore, or by them, we are not to ſeek that ſpecial End for which man was made; becauſe under theſe and the like Conſiderations he ſeems to have a common parity with other created Beings.

But our ſearch muſt be, 1. Whether there be not ſome peculiarities in the Humane Nature, ſome Faculties and Powers, ſomething in his Conſtitution, and ſome adaptations and appropriate accommodations therein peculiar to his nature, and of a far more advanced uſe and perfection than thoſe of the beſt of other inferior Animals: For if we find ſuch in Man, we have juſt reaſon to believe that the moſt wiſe Efficient of the Humane Nature, as he raiſed Man to a greater eminence not only of gradual but of ſpecifical perfection above the common Animal Nature, ſo he deſigned a more excellent and noble End for this more excellent and noble Work: For thus it became the greateſt Wiſdom, to deſign a more noble End to that which he conſtituted a more noble Being. 2. We are alſo to ſearch wherein this excellency and preference of the Humane Nature above the Animal conſiſts: For as the former Conſideration gives us a general Concluſion, That becauſe the Humane Nature is more excellent than the common Animal Nature, therefore the End or Deſign of the Conſtitution of the former is of a nobler kind than the Deſign of the Conſtitution of the latter: So this particular Conſideration of the excellencies of the Humane Nature above the Animal, gives us ſome Eſtimate, *Criſes*, or Indications what thoſe Ends may be which the wiſe Creator intended in the making of Man, namely, ſuch Ends as hold proportions to thoſe eminencies and excellencies wherein the Humane ſpecifically exceeds the Animal Nature.

Plato, though a great Aſſertor of the Creation of Man by the Wiſdom and Power of Almighty God, yet in his 7th Book *De Legibus* ſeems to have too light an Expreſſion concerning the End of the making of Man, and of thoſe many excellencies in the Humane Nature, namely, *Hominem Dei ludo eſſe fictum, atque id verè ipſius optimum eſſe.* It is below the Dignity of the Divine Wiſdom, to think that he made Men, and endued them with thoſe excellent Faculties, only to behold them as a Play or a Scorn; or as the inconſiderate part of Mankind pleaſe themſelves with beholding of Interludes, or Cock-fighting, or Bear-baiting: the Comical part of the Lives of Men are too full of Sin and Vanity, and the Tragical part thereof too full of Sin and Miſery to be a delightful Spectacle unto the pure and wiſe God, who certainly propounded more ſerious Ends than ſuch for ſo noble a Structure.

The Saying therefore of *Plato* muſt be underſtood only analogically, and *Epictetus* may be his Scholiaſt, who wiſheth every Man to remember, *Te eſſe actorem talis fabulæ qualis Magiſtro probata fuerit; ſi brevis, brevis; ſi longa, longa: ſi mendicum agere te voluerit, fac eam quoque perſonam ingenioſè repræſentes; ita ſi claudum, ſi principem, ſi plebeium: hoc enim tuum eſt, datam perſonam benè effingere, eam autem eligere, alterius.* Teaching

us by the ſimilitude, that every Man's Station is ſubject to the Divine Providence, and every Man's Duty is to be contented with it.

But to return to the Conſideration of the ſpecifical Excellence of the Humane Nature above the Animal Nature, and the deduction of thoſe Ends which we may from thence reaſonably conclude to be ſpecifical to him, and intended by his wiſe Creator.

1. It is apparent that Man is the nobleſt of all the viſible Creatures, at leaſt of this inferior World, the Complement and chiefeſt Ornament thereof, without which it would be deſtitute of the moſt glorious Integral thereof: that all the viſible Creatures of this inferior World as it were concenter in him, and are directed to him or his uſe, as their immediate End: that he is an Abſtract or *Compendium* of the greater World, as might eaſily be evidenced by the induction of particulars: that he hath complicated in him all the excellencies of the Elementary, Vital, and Animal Natures: that he hath ſuperadded thereunto a ſingular beauty, and majeſty, and uſefulneſs in the Structure of his Body, the admirable Faculties of Intellect, Reminiſcence, and Ratiocination, the Faculty of Speech, inſtitution of Signs to expreſs his inward Conceptions, Principles, and Habits, Intellectual and Moral liberty and empire of Will, whereby he may, if he pleaſe, govern his ſenſitive Appetite, Paſſions, and inferior Faculties: So that he is *nexus utriuſque mundi*, the common Angle wherein the higheſt and nobleſt of Material and Corporeal Nature is joyned to the Spiritual and Intellectual. By all which, and many more Perfections, he is the nobleſt Inſtance of the Divine Power, Wiſdom, and Goodneſs in this inferior World.

The Univerſe indeed is the great and goodly Type and Image of the Excellency and Glory of its Creator, but it is a vaſt and comprehenſive Volume, not comprehenſible by any Underſtanding but his that made it: But this leſſer World Man is a more compendious Abridgment, nearer unto us, and more diſcoverable by us; and though yet it hath exerciſed the inveſtigation of moſt induſtrious Minds and Searches without a full and perfect diſcovery of the leaſt part of all its Eminencies, yet in reſpect of its vicinity and obviouſneſs to Obſervation it yields a diſtinct and perceptible Evidence to us of the Wiſdom of its Maker. Thus the Humane Nature objectively and paſſively exhibits unto intelligent Beings a wonderful and admirable manifeſtation of the incomparable Wiſdom, Goodneſs, Power, and Excellency of him that firſt created it; and this was one End of Almighty God in the Creation of Man. And although it be true, that ſuch is the Self-ſufficiency and Happineſs of Almighty God, that it is not capable of any acceſſion by all the Inſtances of his Wiſdom and Goodneſs in the Works he hath made, nor by any Glory or Praiſe that from them can return unto him; yet it is not an End unworthy of the moſt perfect Being, to render his Magnificence and Goodneſs conſpicuous, and to receive that deſerved Honour and Praiſe of his Works that is the juſt Tribute due unto him.

2. The Divine Eſſential and Eternal Goodneſs is inſeparable from him, and this is the root of the Divine Beneficence, which latter though in its effluxes and emanations it be under the regiment of his own moſt holy and wiſe Will, yet it is diffuſive and communicative. That the World was at all made, is the Effect of this Divine Beneficence, which

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when it had nothing beſides it ſelf unto which it might communicate it ſelf, it made all things, that according to their different natures and receptivities might participate of the Divine Beneficence: To things vegetable he hath given the Faculty of Life, Vegetation, and Growth; this is one participation of the Divine Goodneſs, *per modum eſſe viventis*: and again, he communicates to theſe Faculties ſuitable Objects anſwering thoſe Vital Faculties; to Senſitive Nature his Beneficence hath communicated thoſe Faculties of Senſe as well as Life, and then communicates to them a farther efflux of his Beneficence, by communicating to them the Objects grateful and uſeful both for Life and Senſe: thus his Beneficence is communicated to them *per modum boni ſenſibilis*; but to Man his Beneficence is communicated not only *per modum boni vitalis & ſenſibilis*, which yet he enjoys as other Creatures, but *per modum boni intellectualis & voliti.*

Firſt, by giving him thoſe nobler Faculties of Intellection and Will, and then by communicating to thoſe Faculties Objects ſuitable to thoſe Powers or Faculties, namely, Intellectual Truths to his Underſtanding, and Moral, Rational, and Divine Good to his Will; and among all thoſe, *vera & bona*, that are communicated to theſe Faculties by the Divine Beneficence, God himſelf, his Goodneſs, Truth, Will, Perfection, are the chiefeſt *verum* and the chiefeſt *bonum*. So that no Creature below Man is capable formally to know, to love, to enjoy God, as the chiefeſt Truth and chiefeſt Good: And this alſo ſeems to be another End of the Creation of Man, that being made a Creature endued with Underſtanding and Will, he might be receptive of the *Effluxus* of the Divine Beneficence in a nobler way than the other viſible Creatures of this lower World.

3. As under the firſt Conſideration Man is more eminently an objective manifeſtation of the Divine Glory, than other viſible Creatures; and as under the ſecond Conſideration Man is more receptive of the Divine Beneficence than other viſible Creatures: So upon farther examination we ſhall find, that Man was made in a capacity to be a more active Inſtrument to ſerve and glorifie his Maker than other viſible Creatures, which was another End of his Creation ſpecifically different from the End of other viſible created Natures, which will appear by the farther conſideration of thoſe two great diſtinguiſhing Faculties, his Underſtanding and Will.

I ſhall not go about to make a large Deſcription of thoſe Faculties, or the Operation, but only obſerve ſo much touching them as may reaſonably evidence the preference that Man hath therein above the inferior Animals, and the Inferences that ariſe thereupon touching the End of Almighty God in the making Man.

And firſt for the Intellective Faculty: As in Animals the Faculties of Senſe internal and external, eſpecially the Viſive Faculty, placeth Animals in a rank of Being far above the inſenſible Creatures, and accommodates them exquiſitly to a Life of Senſe; ſo the Intellective Faculty placed in Man puts him into a rank of Beings far above the moſt perfect Animals, and accommodates the Humane Nature to an Intellectual Life. And the preheminence of this Faculty above the Faculty of Senſe, will appear if we conſider the Operations thereof; I ſhall inſtance but

in two, namely, intellective Perception and intellective Ratiocination or Diſcourſe: 1. For the intellective Perception; the Underſtanding perceives many things which are not perceptible by Senſe or ſenſitive Phantaſie or Imagination; for Inſtance, it hath the perception of Subſtance or Being abſtracted from all ſenſible qualities: it hath the perception of the truth or falſity of a Propoſition, it perceives the Concluſion and the Evidence thereof in the Premiſes, and many more intellectual Objects which never did nor can fall under the perception of Senſe or Imagination: And although we cannot clearly underſtand all the Operations of the Brutal Phantaſie, becauſe we are diſtinct from them, and they have not the inſtrument of Speech intelligible by us to expreſs their perceptions; yet we may know that this is true by our ſelves, for we may perceive that we do perceive theſe Objects not to be perceptible by our Faculties of Senſe, but by ſome other Faculties diſtinct from that of Senſe or ſenſitive Imagination. Again, in thoſe Objects that are objective to Senſe, the intellective perception diſcovers ſomewhat that is apparently unperceived by the Senſe or ſenſitive Imagination; for Inſtance, the Heavenly Bodies, the Sun, Moon, and Stars are equally objected to the view as well of Animals as Men; but yet by the help of intellective perception Man perceives that in thoſe Objects which neither the Brutes, no nor Man himſelf by the bare perception of Senſe or ſenſitive Phantaſie doth not, cannot perceive: The perception of Senſe gives us the Sun no bigger than a Buſhel, and the Stars than a Candle, cannot diſcover an inequality of their diſtance from us; judgeth the body of the Moon to have as many changes in figure and quality as it hath various *Phaſes* or Appearances, the Sun really to ſet, the Limb of the Heavenly Horizon to be contiguous to the Earth: but the intellective perception finds the quantity of the Sun and Stars bigger than the Earth, and by the Parallaxes and Eclipſes finds the Stars more diſtant from us than the Sun, and that than the Moon; perceives diſtinctly their ſeveral Motions, Orders, Poſitions, and makes diſtinctions and computations of Time and Duration by them, and over-rules and confutes the perception of Senſe and Imagination by another kind of perception, above the perception of Senſe. 2. Touching Ratiocination or Diſcurſive Operation, the precedure thereof is above the reach of the ſenſitive Phantaſie, though this ſeems to carry ſome weak and imperfect Image thereof: For Inſtance, ſometimes not only the *media diſcurſûs* and the *proceſſus diſcurſivus* are out of the reach of Senſe, but the very *ſubjectum diſcurſûs* is imperceptible to Senſe: ſuch are that *proceſſus diſcurſivus* of the Underſtanding touching complexed Notions or Univerſals; touching the abſtracted Notions of Being, Subſtance, Entity, and tranſcendents in Metaphyſicks; ſuch are alſo the diſcurſives of moral good and evil, juſt, unjuſt, which are no more perceptible to Senſe than Colour is to the Ear; and yet touching theſe Subjects the Intellect forms Diſcourſes, deduceth Illations and Concluſions. Again, in matters Mathematical and Phyſical, though in the concrete, and in their ſubjects they are objective to Senſe, yet the *media* and *proceſſus diſcurſivus* whereby the Underſtanding makes Concluſions, and Inferences, and Illations touching them, are of a range and kind quite above the range of Senſe or ſenſitive Imagination; thus upon certain *data* or *poſtulata* in Geometry, the Intellect forms Concluſions,

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which though Mechanically and Experimentally true, yet are elicited by a *Proceſſus diſcurſivus*, quite above the activity of ſenſitive Phantaſie. And though matters Phyſical, Bodies, and Tangible qualities, and their ſeveral powers, manner of production, and divers other things relating to them are ſenſible Objects; yet the Intellect uſeth a *Proceſſus diſcurſivus*, whereby it inveſtigates Truths, and draws Concluſions that are quite above the ſcantlet of Senſe or Phantaſie, aſcending up from the Effect to the next Cauſe, and thence to the next, and thence gradually to the Firſt Cauſe of all things. So that though oftentimes the foot or root of the *Diſcurſus intellectivus* be bottomed in ſome ſenſible Object, perchance of no great moment and importance, yet by this *Proceſſus diſcurſivus* the Intellect riſeth higher and higher, and quickly taketh a flight out of the ken or reach of Senſe, in Conſequences, Diſcurſive Inferences, and Concluſions; and follows the Chain higher and higher, till it come to the uppermoſt ring thereof, faſtened, as the Poets wittily feign, to the Throne of Almighty God.

And thus far of theſe two excellent Operations of this Intellective Faculty, namely, Intellective Perception and Diſcourſe. But beſides theſe operations and active exertions of the Underſtanding, there ſeems to be two kinds of accommodations to it, which are admirably ſerviceable to the improving and perfecting of its operations; the one internal, the other external.

The internal is this; As we find in the Senſitive Nature certain congenit or connatural Inſtincts, whereby they are ſecretly and powerfully biaſſed, and inclined, and carried to their proper ſenſitive Good, either individual or ſpecifical; ſuch as are their inclination to that Food that is ſuitable for them, their *Appetitus procreativus*, their care for their Young, and infinite more; ſo there ſeems to be lodged in the Intellective and Rational Nature certain Rudiments and Tendencies, whereby they are carried to the good of an intellectual Life, certain *communes notitiæ*, lodged and connaturally implanted in the Intellect, which ſerve as a kind of connatural inward ſtock for the Underſtanding to work upon, and alſo as a ſecret biaſs and inclination to carry him on to the good of an intellectual Life: Such as are a ſecret inſcribed Notion that there is a God, that he is to be worſhipped, honoured, ſerved, and obeyed; and certain inſcribed common Notices of Moral Good and Evil, that make him propenſe to Juſtice, Honeſty, to do as he would be done by, and the like. And although evil Cuſtoms, and the prevalence of the ſenſual Appetite may in a great meaſure weaken and impair thoſe common Notions when they come to particulars and particular applications, yet it is evident in all Ages and Nations, by a kind of connaturality Mankind hath ever retained theſe two great, and noble, and diſcriminating denominations, namely, firſt to be *Animal religioſum*, ariſing from the energy of thoſe *infinitæ notitiæ* relating to God; and to be *Animal politicum & ſociale*, ariſing from theſe *inſitæ notitiæ* of Moral Good and Evil, and thoſe connatural inſitions of Morality implanted in his nature, which are the great and chief ſupport of humane Society.

The external accommodation of the Intellective Faculty, is that admirable Wiſdom and Goodneſs of God, that hath ſo ordered things, that firſt of all Mankind is accommodated with thoſe Faculties of Senſe, eſpecially

especially that of Sight, whereby he may perceive all sensible Objects that arrive within the distance of their activity: And secondly, in that he hath exposed a very considerable part of his admirable Works to that Sense of his. Had Man been born blind, though his intellective Faculty had been excellent, yet that Faculty had been very unactive, in this Life at least, because the *Basis* or Root of much of its operation depends upon the reception of sensible visible Objects: and had he been endued with Sense, yet if the excellent Works of God had been at so great a distance that they had not been perceptible by him, he had wanted a great contribution to the perfecting of his intellective Faculty. The Divine Wisdom and Goodness hath so ordered things, that he hath not only that receptive Faculty of Sense, especially that of Sight, but hath also presented to his view a great and considerable part of the Universe with great advantage, beauty, and clearness, the inferior or Elementary World with all its variety and store, and the prospect of the goodly Celestial Bodies, their positions, motions, beauty, order, and excellence. And this goodly *Apparatus* of the Universe thus objectively derived to his Understanding, furnisheth it with an outward Stock, upon which it may trade and exercise it self with great delight and advantage; *viz.* 1. The knowledge of things Physical and Natural, the State, Order, and Oeconomy of Nature; the Virtue, Efficacy, and Energy of Second Causes, and their Effects: herein he hath a vast extent of the Inferior and Celestial World to exercise himself in, and certainly this bare knowledge is a thing of excellent improvement and contentation of the Intellect, and far exceeds all sensible Delights; in so much that many wise and knowing Men have chosen to sequester themselves from the common Employments and Contents of Mankind, for the sake of a Life of Philosophical Speculation: But this is the lowest part of that knowledge that is hereby acquirable, there is yet a more noble and excellent knowledge acquirable hereby, that advanceth and improveth the Intellectual Nature to a very great and high perfection. 2. Therefore that knowledge that is hereby acquirable is the knowledge of the Glorious God, the first Creator, and great Conserver and Governour of all things. I have before said, that the Goodness of God had lodged an inward Stock in Man whereby to improve his Intellectual Nature, namely, those *communes notitiæ* of the Existence of a God, and that he is to be worshipped, served, and obeyed, the common Root of Religion in Mankind; these are in him like the first Rudiments of the *Fœtus*, the *Embryo* of Religion, or the Egg as it were out of which it is hatched. The contemplation of the admirable Works in the World doth exceedingly fortifie and improve those first Rudiments of Natural Religion, digests them into their just formation. In these we see, and admire, and glorifie the Power, the Wisdom, the Goodness, the Presence of God; from these we learn his Unity, his Eternity, his Immensity, his Providence, his Justice, his Mercy: And as thus *ascendendo* we learn to know God by his Works, so again *descendendo* we learn our duty to praise, glorifie, magnifie, honour, love, fear, and obey him, to depend upon him, to delight in him: and by this means Natural Religion arrives to a great advance, and the Intellectual Nature mightily perfected and improved; and Man becomes not only a passive, a receptive Instrument to glorifie

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his Maker, but an active Instrument of his Glory; which was, as is premised, another End of Almighty God in the making of Man, namely, That he might be an active intellectual Instrument to glorifie God, and in glorifying him, the more fully to enjoy him, and his favour, love, and goodness.

4. As thus the Intellective Faculties render Man fit actively to serve and glorifie his Maker, so also that other Faculty of his Will contributes also in like manner to render him fit for that employment. We shall for this purpose only consider these two Properties in the Will.

1. The liberty of the Will, whereby it hath power to determin it self, and is free from all force and coaction; and upon this account, namely, that Man is not only an intellectual Creature, but also hath liberty of Will, he becomes a Creature properly susceptive of a Law, and capable of Rewards and Punishments: that which acts out of coaction, as bare Instruments, or out of necessity, as bare Natural Causes, or a determined Instinct, as Brutes, are not properly capable of a Law but only analogically, and what they do is not properly an act of Obedience, because they cannot ordinarily do otherwise. Therefore as his Intellective Faculty gives him the power to know his duty, so the liberty of his Will is that which gives him the power truly to obey.

2. The second property of the Will is, that it is moved and drawn to that which is good, or at least what appears to be so. The sensitive Appetite is a power subservient to a sensitive Nature, and carried to a sensible Good; but the Will is a rational Faculty, a Faculty of an intellectual Nature, and carried to an intellectual Good as its proper Object, and therefore with most earnestness, to the most noble and supreme Good, which is Almighty God. So that as by the liberty of his Will Man is capable to be an active Instrument to serve and obey his Maker, so by this property of his Will he is by a just suitableness drawn to will and desire, and in enjoyment to delight in God as the chiefest Good, the most noble and suitable Object of its choice and motion: And we may observe, that the Divine Goodness and Wisdom, to promote and advance this act of the Will, in choosing and loving Almighty God as his chiefest Good, hath exhibited himself unto Mankind in all the manifestation of Goodness and Beneficence imaginable, hath made him Lord of this inferior World, provides for him, supplies him, and endears him to himself with all those manifestations of Mercy, Goodness, and Bounty that his nature is capable of, whereby he may be won to love God not only as the chiefest Good, but also as his chiefest Benefactor. And thus by the due consideration of both these Faculties of Understanding and Will, we may reasonably conjecture, that the End of Almighty God in creating Man, was to make such a Creature as might actively know, serve, glorifie, love, and obey his Creator, and in that his Service, and Obedience, and Love, enjoy the Love and Favour of that God whom he thus loves and obeys, because we find his Faculties admirably fitted for such an end and use; and certainly the wisest Agent must needs be supposed to design such an End to any Work as is suitable and commensurate to the thing he makes: And these seem to be those Ends for which the wise God created this noble Creature Man, which do more specially relate unto God.

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5. I ſhall now conſider the Ends of Man as they mutually relate one to another. There are theſe particularities in the Humane Nature that ſingularly commend Man each to other; namely,

1. A great love and propenſity to Communion and Society; *Ariſtotle* ſomewhere in his *Politicks* tells us, that among Animals Bees ſeem to be the moſt ſociable, but that Man is by nature more ſociable than Bees.

2. That there are implanted certain connatural tendencies, or moral Principles that do moſt naturally ſuit with humane ſociety; ſuch as the firſt Rudiments of natural Juſtice, Charity, and Benignity, without which it is impoſſible that humane ſociety can be upheld. And this appears hereby, that though it is apparent that evil Educations and Cuſtoms have much defaced and weakned the Principles of Morality among Men, yet they could never extinguiſh it, but even among the Briars and Thorns the Rudiments of natural Juſtice and Morality have ariſen, and all the Order, and Government, and common Regiment of Societies have been maintained and preſerved by it:

Naturam expellas furca licet, uſque recurret.

3. That the benefit of Speech, and thoſe other inſtituted Signs peculiar only to Mankind are of great and principal uſe in maintaining and upholding Society and Communication between Mankind: by theſe each Man communicates his Thoughts and Conceptions to another; each Man inſtructs, directs, and adviſeth another, and makes another partaker of his own Knowledge, Wiſdom, Counſel, and Advice; by this, Contracts and mutual Commerce are upheld, the mutual Faith of each other given and taken, and infinite other advantages: by all which particularities and accommodations of Humane Nature ſubſervient to mutual Society and Love, it ſeems reaſonable to conclude, That the wiſe God intended as one of his Ends of the Creation of Man, that Man ſhould be beneficial to Man, ſhould be inſtrumental for the good of humane Society.

4. There appears in Man, beſides the ſpeculative power of his Intellect, a certain admirable ingeny and dexterity in diſcovering and perfecting divers Arts as well Mechanical as Liberal, for the benefit, delight, and convenience of the Humane Nature: The great Arts of Government Political, Civil, and Oeconomical, the Arts of Husbandry, and Improvements of Nature for Food, Clothing, Medicine; the Arts of Geometry, Arithmetick, and artificial Meaſuring and Partition of Time; the Arts of Architecture, Navigation; the Art of contriving Letters, Writing, Printing; the Arts of Muſick, and Obſervations of the Laws, Orders, and Rules of the Motions and Poſitions of the Celeſtial Bodies, or Aſtronomy; and infinite more, which by the Ingeny and Induſtry of Man have been invented, diſcovered, or perfected in all ſucceſſion of Ages, for the uſe, benefit, and delight of Mankind.

And although we may obſerve an admirable ſagacity and dexterity in many Animals, in certain kind of artifices convenient for their uſe and the uſe of Mankind, as in the nidification of Birds, Bees, Silkworms, and divers others, yet Man hath ſtill the prelation; 1. In reſpect of the variety and multiplicity of his Artificial Inventions and Effections:

Effections: commonly the Artifices of Irrational Natures are ſingle and determinate, but the Arts invented and effected by Man are multifarious, various, and almoſt infinite. 2. Beſides, his rational Faculty is more excellent and perfect than the Faculties of other Creatures in relation to Arts, and more fruitful in it. 3. That one Inſtrument his Hand, which *Ariſtotle* well calls *Organum organorum*, is admirably ſuited and fitted to all variety of Artificial effections more than any of the Organs of other Creatures, as our own Experience without the induction of many particulars may eaſily demonſtrate and evince. By all which, and many other peculiar and diſtinguiſhing adaptations and accommodations of the Humane Nature, we may reaſonably conclude, That the wiſe God in lodging of theſe particularities in the Humane Nature, had one End and Deſign to make Humane Nature beneficent and uſeful to Mankind and to humane ſociety. And therefore that Precept ſo often inculcated by Chriſt and his Apoſtles of Love, Charity, and Beneficence from Man to Man, was no other than the re-enacting of that old Commandment, and directing Man to one of thoſe Ends for which he was made, and which hath ſo many Indications of it ſelf by the peculiar Conſtitution, Make, and Accommodations of our Faculties.

6. But yet farther, the Creation of Man ſeems to have a farther End even in relation to this inferior World, and the Animals and Vegetables themſelves, which deſerves to be obſerved.

Firſt, We may eaſily obſerve among the Creatures of this lower World inferior to Man, that there are ſeveral Ranks of Beings, like ſo many ſeveral Provinces, but eſpecially the Animal and Vegetable Province. Among Animals ſome are fierce, ſtrong, and untameable, as Lions, Tigers, Wolves, Foxes, Dragons, Serpents; and theſe ſtand in need of ſome coercive power over them, that they deſtroy not the *Species* of more profitable, and yet weaker Animals. Again, there are ſome Animals that are more uſeful and ſerviceable to Man, which are more obnoxious to be preyed upon and depredated, and their *Species* to be utterly deſtroyed by the invaſion of the more fierce, voracious, and unruly Animals, as Sheep, Cows, and divers others, which ſtand therefore more in need of protection and preſervation; and thoſe of the more voracious and fierce nature are leſs ſubject to be diſciplined, tamed, and brought into ſubjection; the other are by their very nature more domitable, domeſtick, and ſubject to be governed: and the like we may obſerve in many kinds of Fowls; as there are Beaſts of prey ſo there are Birds of prey, and others more manageable and obnoxious to injury.

Again, if we look into the Vegetable Province, ſome Herbs and Plants are more tender and delicate, and ſtand in continual need of cultivation, and their very Seeds ſtand in need of a more than ordinary care both in reference to their preſervation and proſemination, without which in a little time their very *Species* would be loſt, or at leaſt ſtrangely degenerate; ſuch are many ſorts of Fruit-Trees, Herbs, and choice Flowers. Again on the other ſide, there are multitudes of ſpontaneous productions of Vegetables, or ſuch as are ſo hardy and prolifick, though leſs profitable or uſeful, that without a ſuperintendent induſtry to correct their exceſs, would uſurp the whole face of the Earth, and make it a Wilderneſs, as ſome ſorts of hardy Trees, Weeds, Thorns, Briars,

and other more unprofitable excreſcences; nay the very Superficies of the Earth without a ſuperintendent Cultivation would grow either marſhy and boggy by the defluxion of Waters, or altogether weedy and over-grown with exceſſive excreſcences: And though much of this either infertility or unprofitable excreſcence might be the fruit of the Sin of Man, yet the Wiſe God that foreſaw this Sin and the Effect thereof, was not wanting in providing a fit proviſional Remedy againſt it; that ſo this part of the Work of his Creation might retain its beauty and uſe. And though after the Fall of Man this difficulty of this Employment was greater, by reaſon of the Curſe that thereby befell the Earth, yet even before the Fall the nature of his Employment was the ſame: *He put the Man into the garden of Eden, to dreſs and to keep it. Gen.* 2.

In relation therefore to this inferior World of Brutes and Vegetables, the End of Man's Creation was, that he ſhould be the Vice-Roy of the great God of Heaven and Earth in this inferior World; his Steward, *Villicus*, Bayliff or Farmer of this goodly Farm of the lower World, and reſerved to himſelf the ſupreme Dominion, and the Tribute of Fidelity, Obedience, and Gratitude, as the greateſt Recognition or Rent for the ſame, making his Uſufructuary of this inferior World to husband and order it, and enjoy the Fruits thereof with ſobriety, moderation, and thankfulneſs.

And hereby Man was inveſted with power, authority, right, dominion, truſt, and care, to correct and abridge the exceſſes and cruelties of the fiercer Animals, to give protection and defence to the manſuete and uſeful, to preſerve the *Species* of divers Vegetables, to improve them and others, to correct the redundance of unprofitable Vegetables, to preſerve the face of the Earth in beauty, uſefulneſs, and fruitfulneſs. And ſurely, as it was not below the Wiſdom and Goodneſs of God to create the very Vegetable Nature, and render the Earth more beautiful and uſeful by it, ſo neither was it unbecoming the ſame Wiſdom to ordain and conſtitute ſuch a ſubordinate Superintendent over it, that might take an immediate care of it.

And certainly if we obſerve the ſpecial and peculiar accommodation and adaptation of Man, to the regiment and ordering of this lower World, we ſhall have reaſon, even without Revelation, to conclude that this was one End of the Creation of Man, namely, To be the Vicegerent of Almighty God, in the ſubordinate Regiment eſpecially of the Animal and Vegetable Provinces.

1. The Earth, and Vegetables, and Animals ſtand in need of ſuch a Superior Nature to keep them in a competent order: an ordinary Obſervation lets us ſee how ſoon thoſe Regions uninhabited by Mankind become rude Foreſts and Wilderneſſes, how deſtitute they are of thoſe manſuete Animals, being expoſed without a protector to be the prey of ſavage Beaſts.

2. Man, by the advantage of his intellectual ſagacity and contrivance, is fitted for this Regiment: For although there be many Beaſts much ſtronger than he, as Lions, Tigers, Wolves, and others, yet he is by the advantage of this Faculty enabled to avoid, and over-match, and ſubdue them, and by the advantage of this Faculty hath power to reclaim

thoſe

thoſe that are reclaimable, though of greater ſtrength than himſelf; as Horſes, Elephants, Camels, and to protect and provide for the ſafety and food of thoſe that are either by Art or Nature rendred manſuete, as Horſes, Sheep, Oxen, and to make them ſubſervient to his ends and uſes.

3. Though of all other viſible Creatures Man ſeems the leaſt provided with natural offenſive Organs, yet by the advantage of his intellectual Faculty and that admirable *Organum organorum* his Hand, he is infinitely advantaged with artificial helps to defend himſelf, and ſubjugate the moſt contumacious and furious Brute: The Lion, the Bear, the Tiger, the Wolf, the Horſe, the Elephant, the Bull are furniſhed with natural offenſive and defenſive Munition; but by the advantage of the Hand, Man is able to provide himſelf more ſerviceable Artillery, as Swords, Pikes, Arrows, Darts, Nets, Trapps, Toyls, and to uſe them with greater ſecurity and advantage.

4. We may alſo obſerve a kind of connatural neceſſity impoſed upon Man to exerciſe this Oeconomy and Regiment over Animals and Vegetables, for his own preſervation and defence; without the exerciſe of this Regiment he would be over-run with ſavage and noxious Animals, he would want the ſpeed of the Horſe, the induſtry of the Ox, the Clothing of the Sheep, the Milk of the Cow: without this Regiment he would be without Corn to feed him, Wine to refreſh him, Medicine to recover him, the Earth would become a barren Foreſt or Wilderneſs, over-run with Bryars and Thorns. And it is obſervable, That as the wiſe God hath put all things in motion and action, the Heavenly Bodies, the Elementary Natures, the Meteors, the Animals; ſo it is his Wiſdom to preſerve Man alſo in bodily as well as mental motion, and by a kind of neceſſity driven him from ſloth and idleneſs; if he will live he muſt eat, and if he will eat he muſt labour. Though by the Fall of Man his labour is fuller of toyl and vexation, yet labour and induſtry was part of his duty and employment in the very ſtate of Innocency.

As he hath a buſie office and employment committed unto him, namely, to be God's Vicegerent and ſubordinate Officer in the Regiment of the Vegetable and Animal Provinces, ſo he is under a neceſſity for his own preſervation, and under an advantage for his own profit and convenience, induſtriouſly and vigilantly to exerciſe the Province committed to him.

Thus the infinite Wiſdom of Almighty God chains things together, and fits and accommodates all things ſuitable to their uſes and ends.

5. And yet farther, there ſeems to be found in the Humane Nature certain Affections that carry it on effectually to this employment, his love to himſelf, his ſafety, his convenient ſupplies, wealth, and plenty, invite induſtry and pains, and a complacency and delight attends the acqueſts of honeſt induſtry and pains.

2. Hitherto we have ſeen this part of the End of Man's Creation, namely, to be a ſubordinate Rector of this inferior World, a Tributary King thereof by Inveſtiture from God himſelf, which Inveſtiture was conferred upon Man in his firſt Creation, *Gen.* 1. 29. and again renewed after the Fall and Flood, *Gen.* 9. 3. *Pſal.* 8. 6. *Thou haſt made him to have*

dominion over the works of thy hands, thou haſt put all things under his feet. But there is yet another Office, another End in the Creation of Man, with relation to this inferior World and the Furniture thereof.

Almighty God in the goodly Frame of this World hath manifeſted the exceeding greatneſs of his Wiſdom and Power, as in the Heavenly Bodies, the Sun, the Moon, the Stars, the Elements, the Meteors, the Minerals, the Vegetables, the Animals, they all make up a moſt magnificent and ſtately Temple, and every Integral thereof full of wonder, and bears the Inſcription of the infinite Wiſdom, Goodneſs, and Power of the Glorious God; yet ſtill all theſe are but paſſive, receptive, and objective reflections of the Goodneſs and Glory of God: there is not a Graſs in the Field, not a Tree in the Foreſt, nor the ſmalleſt inſect Animal, the Fly, the Worm, but bear an Inſcription of the incomparable Wiſdom, Power, and Goodneſs of the Glorious God. But yet theſe cannot actively glorifie their Maker, they underſtand not their own original nor their own excellence; the nobleſt Cedar in the Field, nor the vaſteſt Elephant in the *Indies*, nor the goodlieſt Whale in the Ocean have not the ſenſe of their own excellence, nor from whom they had it, nor can actively and intentionally return Praiſe and Glory to their Maker, for they want an intellective Principle to make thoſe diſcoveries or returns.

6. The Glorious God therefore ſeems to have placed Man in this goodly Temple of the World, endued him with Knowledge, Underſtanding, and Will, laid before him theſe glorious Works of his Power and Wiſdom; that he might be the common Procurator, the vicarious Repreſentative, the common High Prieſt of the inanimate and irrational World, to gather up as it were the admirable Works of the Glorious God, and in their behalf to preſent the Praiſes, Suffrages, and Acclamations of the whole Creation unto the Glorious God, and to perform that for them, and as their common Procurator, which they cannot actively, intellectually, and intentionally perform for themſelves. It is true, the whole Creation doth objectively and according to their ſeveral capacities ſet forth the Honour and Glory of their Creator, and cry, *Bleſſing, honour, glory, and power be unto him that ſitteth upon the throne, and unto the Lamb, for ever and ever*; Revelat. 5. 13. and the Pſalmiſt, *Pſal.* 148. calls upon them all to perform that duty: But Man above all viſible Creatures is able to perform that duty intellectually and intentionally, and fitted to be the common Procurator and High Prieſt of unintelligent Creatures, intelligently on their behalf to preſent all their Praiſes and Acclamations to their common Creator, Lord, and Sovereign.

I have now done with thoſe Ends for which we may reaſonably conjecture Man was made; Firſt, in relation to Almighty God; that he might actively Know, Love, Serve, Honour, and Obey Him: Secondly, in relation to others of Mankind; mutual Beneficence, Juſtice, and Charity: Thirdly, in relation to the inferior Creatures; to be their ſubordinate Regent under God, and to be the common Prieſt for the reſt of the viſible Creation, to preſent their Recognitions and Praiſes to their Maker.

I now come to conſider what we may reaſonably conjecture might be the End of the Wiſe and Glorious God in the Creation of Man in relation

relation to himſelf. The former Ends were ſuch as were terminated without him, either to God, the reſt of Mankind, or the unintellectual Creatures; but this Enquiry is touching that End that is terminated in himſelf; the former were Ends of Office or Duty, this of Fruition or Enjoyment.

And in this Enquiry I ſhall firſt proceed Negatively, to ſhew what this End is not; and then Affirmatively, as far as the Light of Nature and natural Reaſon will dictate (for in this Diſcourſe at preſent I go no farther) what it is, or may be reaſonably concluded to be.

As to the former, or Negative Procedure,

1. Therefore I ſay the proper, peculiar end of Man in point of fruition is not a ſenſible fruition, or a Life of Senſe, but ſomewhat that is higher, nobler, and of another nature. It is true, that as Man agrees in the animal Nature with other Animals, and conſequently hath a Life of Senſe as well as they, therein they participate of one common end: but that which we are enquiring concerning, is, the ſpecifical peculiar End of Man, appropriate to, and deſigned for him as ſuch; and therein it is that we affirm the end of his fruition is not the end of a ſenſible Being, but of a Nature ſpecifically and vaſtly different from it. And this I ſhall prove, and alſo illuſtrate by theſe following Reaſons and Concluſions.

1. As I have before obſerved the Method of ſearch and enquiry into the ſpecifical or peculiar end of any Exiſtence, is by obſerving the ſpecifical and peculiar exiſtence of Faculties of that Being; for we have reaſon to think, that the ſpecifical and peculiar end thereof is ſomewhat that bears a ſpecifical proportion to thoſe Faculties and Excellencies: thus we reaſonably conclude, That ſince the Animal Nature hath a ſpecifical and peculiar excellence and faculty above Vegetables, namely, the faculty of Senſe, that therefore its proper end of fruition is not a bare fruition of a vegetable Life or the commenſurate Good thereof, but a Good that is ſuperior, and accommodate to the Life of Senſe. And upon the ſame account we may conclude, That ſince the Excellence and Faculties of the Humane Nature are of a higher Make and Order than that of Senſe, namely, an intellectual Faculty; therefore the peculiar end of the Humane Nature is not terminated in a Life of Senſe, or a fruition of that Good which is not only proportionate or accommodate to a ſenſible Life or Nature, but in a fruition of ſomething anſwerable to the eminence and nature of an intellective Faculty. Now it is apparent to any conſiderate Man, that the Operations, the Objects, the Delight of the intellectual and rational Faculties of Underſtanding and Will, lye higher than the Faculties of Senſe, and have little communion with them: The very contemplation of natural Cauſes and Effects, if we went no higher, are not in order to a ſenſitive Good, but often deprive us of it: the contemplation and action of moral Virtues are above the reach of Senſe; tranquillity of Mind, peace of Conſcience, perception and fruition of the favour and love of God, the ſatisfaction of the Underſtanding in that contemplation, the motion and tendency of the Will towards it as its chiefeſt Good: Theſe are things that delight and pleaſe the Intellectual Nature, (if not baſely and groſly immerſed in, and proſtituted to the Animal Nature) are more grateful, ſapid, and

delightful

delightful to the Mind, than the beſt *Apparatus* or Proviſions of a ſenſible Good.

2. Again, it is apparent that the very excellency and preference of the Intellectual Nature doth render the fruition of the Good of Senſe leſs good, leſs ſatisfactory, than it is to the Brutes: the Good of Senſe is ſo far from being the ſpecifical or peculiar end of Man, that the very Make, Texture, and Order of his nobler Faculties renders it not only incomplete, but deficient, and leſs competent to him, than if he had not this excellency of Faculties which are ſpecifical to his Nature. And therefore certainly it can never be that Good that is the appropriate end of fruition in Man, for it is leſs good to the Beaſts, and that even upon the very account of the excellencies of his Faculties: I ſhall give many Inſtances hereof.

The fruition of the delights of Senſe in the Beaſts are more entire, ſimple, and unallayed than they are in Men; becauſe it is apparent, that in the Intellective Nature there is ſomething that checks, controls, and ſowrs the fruition of Senſe, namely the Conſcience, which hath oftentimes a contrary motion, and checks the inferior Faculties of Senſe, even when it oftentimes cannot control it, it chides and allays the contentation of ſenſual Delights; ſo that even in Laughter the Heart is ſorrowful: but the Brutes have no ſuch correction of their Delights in fruition of Senſe, but are entire in their enjoyments.

Again, it is a great perfection of the Humane Nature, that it hath a more fixed, ſtrong, and compact memory of things paſt than the Brutes have: A Brute forgets his fruitions when they are paſt, hath not the ſenſe, much leſs the memory of any faults or follies committed by him; and therefore his preſent fruitions are not ſowred with the remembrance of thoſe better ſeaſons of delight that he once had: But Man hath ever a remembrance of what is paſt, he remembers his faults and follies, and what ſenſible advantages he loſt by this or that inadvertence, overſight, or folly; if his proſperity or fruition were formerly greater, it depreciates his preſent enjoyment: ſo that the excellence of his memorative Faculties makes his preſent enjoyment faint, weak, and taſtleſs.

Again, Man hath a more exquiſite ſenſe of preſent incumbent evils than the Beaſts have: as his fruition of the ſenſible Good he enjoys is not ſo entire as the Beaſts, ſo his ſenſe of any incumbent evil is more ſharp, quick, and galling than that of the Beaſts, and thereby his preſent ſenſible contentations are ſowred and allayed. When *Haman* had all the ſenſible Honours, Wealth, Affluence, that the Court of the greateſt Monarch in the World could yield him, yet the want of a bow from *Mordecai* ſowred all his enjoyments, and made him ſick for the want of it. And when *Ahab* had all the Honours and Proviſions that a Kingdom could afford him, yet the want of *Naboth*'s little Vineyard rendred all his enjoyments taſtleſs. And this Conſideration is eaſily improveable, if we conſider that the very ſtate and condition of our ſenſible Life hath many more diſtaſtful and ſharp ingredients than the brutal Life hath; and the greateſt ſenſual Contentments in Man are commonly haunted with more than one of theſe diſpleaſing Gueſts: The Beaſts have no ſenſe of reproach, diſhonour, diſgrace, which yet ſit

cloſe

cloſe upon Men, eſpecially of great Spirits and Enjoyments. The Diſeaſes and Diſtempers in Man are ten to one more in number, and ſharper or longer than in Beaſts: and any of theſe render the beſt ſenſual Enjoyments either taſtleſs or vexing.

Again, and moſt principally of all the reſt, the Brutes have little proſpect to the future, if any at all; their proviſions for things to come, as for the Winter, for their Young, and the like, ſeem not ſo much acts of diſtinct knowledge or foreſight of the future, as certain connatural Inſtincts alligated to their nature by the wiſe and intelligent diſpoſition of their moſt wiſe Creator. And hence it is, that they have no conſideration or fear of death till they feel it; and if they have a good Paſture at preſent, they are not ſolicitous how long it will laſt, or what they ſhall do after: they are not tormented with fears of what may come, becauſe they have no anticipations or ſuſpitions of what may be in the future; and by this means their enjoyments are ſincere, unallayed with fears or ſuſpitions, they fear not death, becauſe they are not ſenſible of their own mortality till they feel themſelves dying: But the caſe is quite otherwiſe with Man, the excellency of his Faculties, and the impreſſion of Experience and Obſervation gives him a foreſight of many things that will come, and a ſtrong ſuſpition of many more that may come; and by this means he anticipates Miſeries, and becomes twice miſerable: firſt, in fears, pre-apprehenſions, and anticipation, and then again in the actual undergoing of it; and if thoſe ſuſpected and feared evils never overtake him, yet he is equally if not more miſerable than if they did: For his pre-apprehenſions and ſuſpitions renders them as ſharp as if they were felt, and many times ſharper, by the appoſition of the moſt hideous and aggravating circumſtances that his thoughts and fears can faſhion. And this very advantage of anticipation and foreſight, which is a perfection and excellence in Man above the Brutes, ſaddens his Joy, galls and frets his ſenſual Contentment, and upon the very account of his own excellency and perfection renders the fruition of a ſenſible good utterly incompetible to be that end of fruition which the wiſe God deſigned for him: Thus when he hath Wealth and Plenty he is under a thouſand cares and fears, ſometimes of falſe Accuſers, ſometimes of Thieves and Robbers, ſometimes of Fire and Caſualty; and while he is rich and plentiful in fruition, he is poor and miſerable by anticipation: If he be in Health and Strength, whereby ſenſual Goods have their proper guſt and reliſh with him, yet he is under the fear of Sickneſs, Pain, and Diſcompoſure, which fear renders the Diſeaſe in a manner preſent before it comes, and ſo gives a diſtaſt and diſreliſh to even his preſent fruition.

And now if it be ſaid, That as this ſagacity and foreſight ſometimes gives a diſadvantage under Enjoyments by the Paſſion of Fear, ſo it makes an amends under ſenſible Inconveniences by the Affection of Hope: I anſwer, It is true, it doth make ſome amends, but yet it is not anſwerable.

For firſt, the anticipations of Fear are ever more vigorous than the anticipations of Hope. 2. The objects, means, and occaſions of our fears in relation to ſenſuals, are ever more and greater than the objects of our hopes; becauſe we are obnoxious more to dangers, and thoſe of

divers

divers kinds, than we are to deliverances and recoveries from ſenſible evils. 3. But that which is *inſtar omnium* is this; Death puts a period to all ſenſual Comforts, and this Death is certain will overtake us, and we know not how ſoon; and this foreſight of Death is a certain foreſight, and a continual object of certain fear. And this fear of Death, and the anticipation thereof is always preſent with us, and we cannot deliver our ſelves from the fear and foreſight of it, no more than we can deliver our ſelves from the thing it ſelf; and commonly the anticipation and fear of Death is more terrible, and dreſſed up in a more hideous proſpect than Death it ſelf. And this one proviſion and anticipation of Death, is that which makes all ſenſual Goods utterly incompetible to be a ſuitable end of fruition to a Man, upon theſe two accounts, *viz.* Firſt, that this preſenſation and anticipation of Death doth ſadly allay all ſenſible enjoyments, makes them weak, and renders them ungrateful. The Expreſſion is excellent, *Heb.* 3. 15. *Who through fear of death were all their life time ſubject to bondage:* the delicacies of a Man in Bondage loſe their taſt and reliſh. Again ſecondly, it preſents all our enjoyments as determined or determinable in a ſhort time, which takes off the value of any ſenſible enjoyment. It muſt needs be, that ſenſual enjoyment muſt be abated, when he that enjoys it doth in the very enjoyment thereof know it muſt not laſt long: a Beaſt enjoys his full Paſture with greater contentment, that yet ſhall be taken from him, or he from it to morrow; than any Man can enjoy the ſweeteſt Proviſion for his Senſe, while he is under the actual ſenſe that he muſt dye to morrow. The advantage of the anticipation of Death is that which renders it impoſſible that a ſenſual good can be the ultimate good of fruition to Man, ſince it is by that very advantage rendred a leſs good to him than to the Beaſts that periſh.

The Proof of the Immortality of the Soul of Man belongs to ſome of the following Diſcourſes, I ſhall not now launch out into that Deep. But to me this very Conſideration, that the very excellence of the humane Faculties, eſpecially that whereby he hath a proſpect and conſiderate anticipation of Death, renders the good of Senſe leſs good, delightful, and pleaſant to this excellent Creature Man than it is to the very brute Beaſts; hath been a ſtrong Moral Evidence, that there is an immortal Soul in Man, for which an immortal Good is reſerved: Becauſe it ſeems not ſuitable with Divine Wiſdom and Oeconomy, that the Brutes ſhould have a greater felicity than Man; yet ſo it muſt be, if the end of Man's fruition were only a ſenſible Good, or a Good ſuited only to the Life of Senſe.

2. And ſurely if the good of Senſe be not the adequate end of humane fruition, then much leſs can thoſe things be the end of fruition intended for Man, which are but proviſional and ſubſervient only to the good of Senſe; and ſuch are Honours, Grandeur, Power, and Wealth, they are but ſo many ſubſervients to the acquiring or performing of the good of Senſe, or the fruition of a ſenſible Life to him that hath them, and therefore lower and leſs valuable than thoſe things for whoſe ſake and uſe they ſerve.

And thus far I have gone in the Negative, whereby I have endeavoured to evince that the good of Senſe, the fruition of thoſe good

things

things that ſerve for a ſenſible Life, Meat, Drink, Clothing, the Pleaſures and Delights of the Senſes, the expletion of the Faculties of the Senſible Nature; their motions are not the peculiar end of fruition deſigned by the wiſe God to the Intellectual Nature of Man. I come to conſider it Poſitively, That there is an end of Fruition, and what we may reaſonably conjecture it may be.

That Man was created for an end of fruition appears, 1. From the nature of the Efficient: It is, as before is obſerved, the property of every intelligent and wiſe Efficient in all his Works and Actions to intend an End, and an end ſuitable to the value of the work, but that is not always an end of fruition to the work it ſelf; it is ſufficient, that there is an end in the work: Many times a wiſe Agent produceth a work or effect in order to ſomething elſe, an inſtrument ſubſervient to ſome other thing; and thus he might have made Man only to ſerve, glorifie, and honour his Maker, as a Man makes a Saw or a Watch as an Inſtrument for his own uſe, without any communication of a Good of fruition to the thing thus made. But as Almighty God is a moſt wiſe Efficient, ſo he is a moſt benign and bountiful Efficient; He made all things not only for the glory of his Wiſdom, but for the communication of his Goodneſs to the things He thus made, according to the meaſure and capacity of their participation. He made the inferior Animals for the glory of his Wiſdom and Power, and for the ſervice of Man, and yet he communicated to them ſo much of fruition and enjoyment, and of ſuch a Good as was ſuitable to their nature, namely, a ſenſible Good. There is not the meaneſt Inſect in the World but hath a Good of fruition proportionate to its nature, namely, of a ſenſible Good in which it delights, and which it endeavours to preſerve. And thus as the Wiſdom of this great Efficient made Man the moſt excellent of Viſible Natures, for an end, and ſuch an end as was ſuitable to the excellence of the Nature he thus made, namely, actively to ſerve and glorifie his Maker; ſo the Goodneſs and Beneficence of this bountiful Efficient deſigned an end of fruition to this Creature, and deſigned unto him alſo ſuch a fruition, and of ſuch a good as is proportionate to the excellence of that Nature he thus made: And otherwiſe he ſhould have been proportionally leſs beneficent to the nobleſt of ſublunary Creatures, than he is to the meaneſt of living Animals, which together with the end deſigned in them *in ordine ad aliud*, have an end of fruition of ſuch a Good as is proportionate to their being, nature, and capacity.

2. And as thus the contemplation of the Efficient, and his Beneficence to other created Beings, induceth us to conclude an end of fruition deſigned to Man, ſo the contemplation of the Work it ſelf concludes the ſame. Man hath in the peculiarity of his nature theſe two great Powers and receptive Faculties, whereby he is rendred amply capable of a great enjoyment, namely his Underſtanding, whoſe proper Object is Truth, and the nobleſt Truth that is, and its proper action is directed to that Object, namely, Intellection and Will, whoſe proper Object is [Good,] and the greater and more ſovereign the Good is, the more ſuitable it is to this power, and the proper act of this power is to reach after, and deſire, and embrace, and delight in its Object: and the filling of theſe two receptive powers with the chiefeſt intellectual Truth, and

with the chiefeſt and intellectual Good, is that which perfects, advanceth, and enableth theſe Faculties or Powers.

And this doth lead us to a juſt diſcovery of what that end of fruition is, for which Man was deſigned by his beneficent Creator, namely, ſuch as is ſuitable, anſwerable, and proportionate to thoſe Powers or Faculties in Man whereby he excells all inferior Animals, his Underſtanding and his Will; and herein conſiſts his happineſs, his end of fruition or enjoyment.

1. As to his Underſtanding, the great and general fruition of Good therein is Knowledge: Now I ſhall diſtinguiſh theſe Objects of Knowledge or *Scibilia* into two kinds; 1. The *Scibilia ſubordinata*, which being united to the intellective Power by that act or habit which we call Knowledge, do advance and perfect this Power or Faculty in a ſubordinate way, meaſure, or degree; ſuch is the knowledge of Natural Cauſes and Effects of Arts Liberal or Manual, of Rules of *juſtum* and *decorum*, of Moral Truths, and the like: this gives a ſubordinate perfection and fruition to this Power varied and diverſified according to the worth of the Objects, and the perfection or clearneſs of their perception. 2. The *Scibile ſupremum*, which is the ever-glorious God, his Perfection, Attributes, Wiſdom, Power, Goodneſs, his Will, and Commands, ſo far forth as that infinitely perfect Being is cognoſcible by our finite Underſtanding: This is the ſupreme Truth, the higheſt fruition of the intellective Power, and the greateſt perfection of an intellective Nature as ſuch.

2. Again, as to the power of the Will, it hath likewiſe Objects of Good anſwerable to the former diſtribution. 1. The ſubordinate Good of Moral Virtues, Honeſty, Sobriety, Juſtice, Temperance, and all the train of Moral Virtues; theſe being united to the Will in their acts and conſtant habits, the Will enjoys a great Moral Good, tranquillity of Mind, complacency and delight. 2. The Sovereign Good, which is the glorious God, reached after by the Will as the chiefeſt Good, and enjoyed in the manifeſtations of his Love, Favour, Preſence, Influence, and Beneficence: this fills the vaſteſt motions of the Will, fills it with Peace, Contentation, and Glory, and keeps it nevertheleſs in a perpetual motion, by returns of Gratitude, humble Love, Obedience, and all imaginable extenſion of it ſelf for the Service, Honour, and Glory of that God that hath thus bountifully given to the Soul a power in ſome meaſure receptive of his Infinite Self, and fitted that power with a proportionate Good, even the Goodneſs and Bounty of the ever-glorious God.

And now becauſe Man hath a double ſtate, namely, a ſtate in this Life in conjunction of the Soul with the Body, naturally diſſolvible, and a ſtate of Immortality after this Life, either in the Soul alone, or in the Soul in conjunction with an immortal Body, as ſhall be ſhewn in its due time: therefore proportionable to this double ſtate is that fruition which Almighty God deſigned for his End.

1. In this Life, the proportionable fruition of Man is that which is compatible to the ſtate he hath here, namely, the knowledge of God and his Works in a meaſure ſuitable to the intellectual Capacity in this Life, the ſenſe of the Divine Love, Favour, Goodneſs, and Protection, the ſenſe of his own Duty to God, to Man, to himſelf, with a cheerful endeavour to obſerve it: And from theſe ariſe dominion over his Paſſions and

inferior

inferior Faculties, and the due placing, ordering, and moderation of them; a reſignation of his Will to the Divine Will, and a dependance upon his Goodneſs, Power, and All-ſufficiency: and from all theſe ariſe peace of Conſcience, contentation and tranquillity of Mind, in which even the wiſeſt of Heathens placed the greateſt Happineſs acquirable in this Life.

2. After this Life an immutable ſtate of everlaſting Reſt and Happineſs in the Beatifical Viſion of God, and fruition of ſo much of his Goodneſs and Beneficence as a glorified Soul is capable of: for it is reaſonable that the end of fruition of an Immortal Nature ſhould be an everlaſting Good, commenſurate in its intention and duration to ſuch an Immortal Nature.

And now if any Man ſhall enquire if this be the End of Almighty God in the Creation of Man, How comes it to paſs that all Men attain not this End, or how comes it to paſs that Almighty God comes to be fruſtrated of the End which he thus deſigned, as well in relation to his own Glory, as the Good of Mankind?

I Anſwer, firſt in general, That this Enquiry belongs to another way of Examination, namely, herein we muſt have the aſſiſtance of Divine Revelation, both to anſwer this Enquiry and to guide us in it, which in this place is not deſigned to be proſecuted.

2. Yet more particularly thus much I ſhall ſay, 1. That the wiſe God hath as it were twiſted his own Honour and Glory with Man's Felicity and Happineſs; if Man decline to honour, glorifie, love, and obey his Maker, and caſts off the primary and chief End of his Being, it is juſt and neceſſary that he be deprived of the End of his own Fruition and Happineſs, which is the Reward of his Duty. 2. The Liberty of the Will was the great Prerogative of the Humane Nature, and Almighty God having furniſhed that Nature with all conducibles to enable him to obey, and to continue him in that Obedience, Man by the abuſe of his own liberty deprived himſelf of his own felicity: When we ſpeak therefore of the End of Man we ſpeak of it as God made him, not as Man made, or rather unmade himſelf.

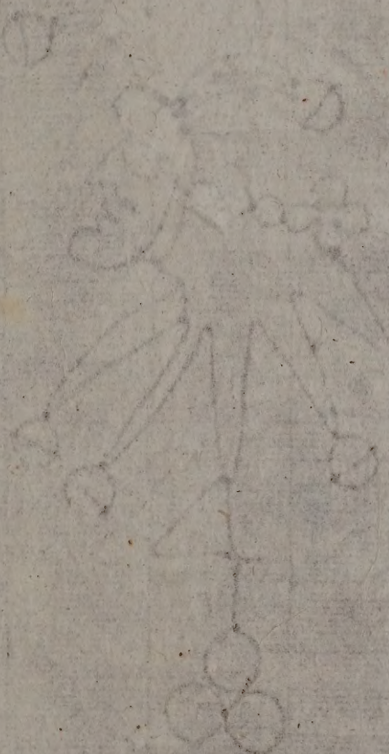
But of this End of the means of his Reſtitution by Chriſt, and the admirable Syſtem and Connexion of the Divine Providence in relation to Man in his Redemption, belongs to another Diſcourſe: We are in this preceding Diſcourſe but in the outward Court of the Temple, where the Gentiles came, or might come by natural Light or Ratiocination.

Therefore to conclude all,

Almighty God out of his abundant Wiſdom, Goodneſs, and Beneficence as he hath made Mankind, ſo he hath fitted him for a double End, namely, to glorifie his Maker, and everlaſtingly to enjoy him, and in order hereunto hath given him a double ſtation, and in each of theſe a differing kind of fruition of his Maker, *viz.* a ſtation in this lower World, and a ſtation in the glorious Heavens.

His ſtation in this lower World, is during the time of his mortal Life here below; and in this ſtation the glorious God hath furniſhed Mankind with all conveniencies and accommodations ſuitable to it, as the comfortable Accommodations of his ſenſible Life, the Comforts of humane Society, the Uſe and Dominion of his Creatures, the admirable Faculties of his Mind, the Books and Inſtructions of his Word and

Will, the goodly Works of Creation and Providence, the Tenders and Ayders of his Grace and Guidance, the Effluxes and Manifeſtations of his Favours and Love, the Anticipations and Hopes of Eternal Happineſs; theſe and many more ſuch as theſe, the Bountiful God affords to Mankind, even in this ſtate of Mortality, which may and do render it in a great meaſure very comfortable.

But withall he lets us know, and we muſt know, That theſe are but as ſo many Bounties to render our paſſage through this Life the more eaſie and convenient to our ſelves, and the more ſerviceable to our great Lord and Maſter: This is not to be the place of our reſt or final happineſs, but a place of exerciſe and probation, a place of preparation for our future and more durable ſtate; we are here as it were but put to School to learn our Duty and our Leſſons, we are but as young Plants planted in a Nurſery, till we come to a convenient ſize and fitneſs to be removed, and then we are to be tranſplanted into another and a richer Soil. In this World we are as it were Seeds ripening upon the Trees or Stalks till they are fully digeſted and ripe, and then as the Seeds drop into the Ground and become the Seminary of a new Plantation: ſo by Death we drop into Eternity, and become the Children, the *Embryones* of the Reſurrection, and then we come into that ſecond and bleſſed ſtation, the Country of our Reſt and Happineſs, our Home, and the End of our Being; where we ſhall ever behold the Glory of the Glorious God, and glorifie him for ever; where we ſhall have the perpetual, ſenſible, vigorous, ſatisfactory Manifeſtation and Influences of his Love to all Eternity, and enjoy that Bleſſedneſs which Eye hath not ſeen, nor Ear heard, neither hath entred into the Heart of Man to conceive: And this is the great End of the Glorious God in making this great goodly Creature called Man, whoſe Body is but the Husk, the Shell of that vital, immortal Beam of Light, Life, and Immortality, that Seminal Principle of Eternal Life, the Soul, irradiated and influenced by the Sacred Spirit of Life and Love, and if God lend me Life and Strength, ſhall in my next be handled.

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